

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

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| OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM, Plaintiff, v. FEDERAL HOME LOAN MORTGAGE CORPORATION, et al. Defendants. | Civil Action No. 4:08-cv-00160 Judge Benita Y. Pearson Magistrate Judge Jennifer Dowdell Armstrong |
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**AMENDED DECLARATION OF W.B. MARKOVITS IN SUPPORT OF PLAINTIFF’S
MOTION TO STRIKE PORTIONS OF THE REPORT AND EXCLUDE PORTIONS OF
THE EXPERT TESTIMONY OF DR. MUKESH BAJAJ**

I, W.B. Markovits, declare as follows:

1. I am lead counsel for Plaintiff Ohio Public Employees Retirement System in the above-caption matter. I make this declaration in support of Ohio Public Employees Retirement System’s Motion to Strike Portions of the Report and Exclude Portions of the Expert Testimony of Dr. Mukesh Bajaj and for Relief from Briefing Restrictions.

2. I was scheduled to depose Dr. Bajaj on February 29, 2024, beginning at 9:30 am EST. On that morning, at approximately 8:00 am EST, I received an email from defense counsel informing me that that Dr. Bajaj had taken ill and that the deposition would have to be postponed.

3. At defense counsel’s request, the deposition was rescheduled for March 13, 2024, and was taken on that date. I deposed Dr. Bajaj for very close to the full seven hours.

4. I had requested the rough transcript as soon as possible, but did not receive it until the afternoon of March 14, 2024, precluding effective review by myself and OPERS’ experts for inclusion of information or testimony resulting from that deposition in the Motion.

5. I did not receive a paginated transcript until approximately 1:00 p.m. EDT on March 15, 2024.

6. By contrast, the depositions of OPERS' experts were taken on: November 6, 2023 (fact deposition of Howard Shapiro); January 10, 2024 (expert deposition of Howard Shapiro); and December 20, 2023 (expert deposition of Dr. David Tabak).

7. Attached are true and correct copies of:

Exhibit 1: Expert Report of Mukesh Bajaj, Ph.D., dated January 19, 2024.

Exhibit 2: *New York Times* article by Michael N. Grynbaum dated November 21, 2007, entitled *Loan Crisis Entangles Freddie Mac*.

Exhibit 3: *New York Times* article by Floyd Norris dated November 22, 2007, entitled *From virtuous cycle to vicious credit cycle*.

Exhibit 4: Backup data for Figure 3 at p. 44 of the Bajaj Report provided to OPERS counsel.

Exhibit 5: Transcript of the Deposition of Dr. Mukesh Bajaj taken on March 13, 2024, dated March 15, 2024.

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Tucson, Arizona, this 27th day of March, 2024.

/s/ W.B. Markovits

W.B. Markovits

EXHIBIT

1

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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

OHIO PUBLIC EMPLOYEES
RETIREMENT SYSTEM,

Plaintiff,

v.

FEDERAL HOME LOAN MORTGAGE
CORPORATION, a/k/a FREDDIE MAC,
RICHARD F. SYRON, PATRICIA L.
COOK, ANTHONY S. PISZEL AND
EUGENE M. McQUADE,

Defendants.

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)
)
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) CIVIL ACTION NO. 4:08-CV-00160
)
)
) JUDGE BENITA Y. PEARSON
)
) MAGISTRATE JUDGE
) WILLIAM H. BAUGHMAN, JR.
)
)
)

EXPERT REPORT OF MUKESH BAJAJ, PH.D.

January 19, 2024

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I. Qualifications

1. I am a Senior Consultant in the Finance Practice of Charles River Associates (“CRA”). CRA is a leading global consulting firm that offers economic, financial, and strategic expertise to major law firms, corporations, accounting firms, and governments around the world. My curriculum vitae is attached as Appendix 1.

2. In 1988, I graduated from the University of California at Berkeley earning a Ph.D. in Business Administration with a specialty in finance. I was awarded an M.B.A. from the University of Texas at Austin in 1987. I was awarded a Bachelor of Technology degree in 1981 from the Indian Institute of Technology in Delhi, India.

3. As a financial economist, I specialize in the study of capital markets, including the valuation of stocks, bonds, warrants, restricted stock and other complex contingent securities, intellectual property, intangible assets, corporate hedging practices (through derivatives and other methods), conducting event studies to determine the significance of stock price reactions to particular events, and analyzing market efficiency, materiality and loss causation issues related to securities class action claims.

4. Since 1996, I have been engaged as an expert in financial economics on numerous matters involving allegations of securities fraud, valuation of firms and their securities, intangible assets and intellectual property and transfer pricing by multinational corporations. I have testified as an expert either in court or at a deposition in over 60 matters, including almost 30 matters concerning liability and/or damages issues in securities fraud cases. In such securities fraud cases, I have testified on behalf of the U.S. Securities and Exchange Commission (“SEC”) and the U.S. Attorney’s Office in a criminal matter, as well as on behalf of both plaintiffs and defendants in civil and criminal matters.

5. In addition to my consulting work and business activities, I have taught graduate-level courses in corporate finance, investments and financial engineering as a visiting lecturer with the

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Haas School of Business (“Haas”) at the University of California at Berkeley. At Haas, I served as a Graduate Student Instructor while earning my Ph.D. between 1983 and 1988. From 1988 to 1995, I was an Assistant Professor of Finance and Business Economics at the University of Southern California.

6. I have authored or co-authored more than 25 publications and working papers in the field of financial economics. My research has been published in *The Journal of Finance*, *The Journal of Financial Economics*, *The Journal of Financial Research*, *The Journal of Applied Finance*, *International Economic Review*, *Research in Finance*, *The Journal of Corporation Law*, *The Journal of Derivatives*, and *Research in Law and Economics*.

7. I am a member of the American Finance Association, the Western Finance Association, and the Financial Management Association, and I have lectured widely on a variety of issues in financial economics.

8. In this case, I have been retained by counsel for the Federal Home Loan Mortgage Corporation (“Freddie Mac” or the “Company”). CRA is being compensated for my work at my hourly rate of \$1,500 per hour. That compensation is not in any way dependent on the opinions I express on issues in this matter. I am independent of the Plaintiff and the Defendants in this matter. I have been assisted in my work on this case by my colleagues at CRA, for whose work CRA is being paid at their regular hourly rates.

9. The documents I have considered are cited throughout my report and/or listed in Appendix 2. If additional information becomes available, I reserve the right to supplement or modify the opinions set forth in this report.

II. Background and Scope of Assignment

10. This report concerns a securities action brought by Plaintiff, Ohio Public Employees Retirement System (“OPERS” or “Plaintiff”) against Defendants, Freddie Mac and certain Freddie

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Mac executive officers (collectively, “Defendants”).¹

11. OPERS alleges that throughout the period August 1, 2006 to November 20, 2007 (the “Relevant Period”), Defendants made material misrepresentations and omissions² “relating to, among other things,

- (i) [Freddie Mac’s] exposure to or risk of loss from subprime mortgage loans and other nontraditional, high risk mortgages, including “Alt-A” mortgages (a mortgage industry term to describe reduced documentation/higher credit risk loans);
- (ii) its underwriting guidelines and Defendants’ adherence to those guidelines,
- (iii) its loan analysis software and fraud detection systems,
- (iv) its risk management measures and its risk management performance, and
- (v) its capital position.”³

And Plaintiff alleges the “primary fraud was Defendants’ failure to disclose Freddie Mac’s true subprime exposure.”⁴

12. Plaintiff further alleges that these material misrepresentations and omissions caused the market price of Freddie Mac’s common stock to be “artificially inflated” throughout the Relevant Period until November 20, 2007 Freddie Mac announced to the public its earnings for Q3 2007.^{5,6} On that day, Freddie Mac announced losses of over \$2 billion for the quarter including “significant

¹ Third Amended Complaint, ECF No. 166 (the “Complaint” or “TAC”).

² I will refer to alleged misrepresentations and alleged omissions together as “misrepresentations,” or “disclosure defects” except when I treat them separately, in which case I will indicate that I am doing so.

³ TAC, ¶2.

⁴ TAC, ¶3.

⁵ TAC, ¶269-278.

⁶ In this report I refer to Freddie Mac’s specific financial quarters in numeric terms as Q1, Q2, Q3 or Q4 denoting the first through fourth quarters, respectively. Freddie Mac’s Q3 2007 earnings release was issued before trading hours on November 20, 2007, and included: (a) a press release titled “Freddie Mac Reports Third Quarter 2007 Net Loss of \$2.0 Billion or \$3.29 Per Diluted Share, Core Business Growth Offset by Credit and Valuation Losses” (“Q3 2007 Earnings Release”); (b) Consolidated Financial Statements; (c) Core Tables; and (d) an Information Statement Supplement titled “FINANCIAL REPORT FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2007” (“Q3 2007 Information Supplement”). Later that day at 10:00 a.m. ET, Freddie Mac held an earnings conference call with analysts where Freddie Mac discussed, among other things, a presentation titled “Freddie Mac’s Third Quarter 2007 Financial Results November 20, 2007” (“Q3 2007 Slides”).

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subprime losses” with more “significant losses expected.”⁷ These announcements allegedly revealed Freddie Mac’s true “subprime exposure,” “potential capital impairment,” its “precarious financial position,”⁸ and “the nature, extent and impact of the fraud...”⁹ OPERS also alleges that this November 20, 2007 corrective revelation caused Freddie Mac’s common stock price to fall 29% that day as the stock “reflect[ed] the newly emerging truth about Freddie Mac’s investments, risk management, financial condition and results,” which in turn caused “foreseeable losses” and OPERS to suffer “damages.”¹⁰ Plaintiff seeks damages for alleged “violations of Sections 10(b) and 20(a) of the Exchange Act” and “SEC Rule 10b-5 promulgated” thereunder.¹¹

13. I understand from counsel that Plaintiff seeks damages according to a “materialization of risk theory of liability.” As the Court noted, “OPERS claims that Defendants concealed certain risks that, when they materialized, caused the stock price to drop.”¹² In this report, when I refer to the information released by Freddie Mac on November 20, 2007 as the “alleged corrective disclosure” or November 20, 2007 as the “alleged corrective disclosure date” I am using those phrases to mean Plaintiff’s allegations based on their materialization of risk theory.

14. I also understand that while OPERS originally sought to represent a class of investors who purchased the common stock over the Relevant Period, certification of that class was denied by this Court on August 14, 2018¹³ and the Sixth Circuit denied review.¹⁴ Among other reasons, the Class Cert Order denied certification because OPERS “fail[ed] to demonstrate that Freddie Mac’s stock traded in an efficient market,”¹⁵ an essential prerequisite “[t]o benefit from the fraud-on-the market presumption” of reliance on alleged misstatements and omissions.¹⁶

⁷ TAC, ¶¶134, 139.

⁸ TAC, ¶¶4,6.

⁹ TAC, ¶271.

¹⁰ *See, e.g.*, TAC, ¶¶6, 191, 271, 277.

¹¹ TAC, ¶14.

¹² Memorandum of Opinion and Order, August 14, 2018, ECF No. 478 (“Class Cert Order”), page 38.

¹³ *See* Class Cert Order, pages 1-2 and 41.

¹⁴ *In re Ohio Pub. Emps. Ret. Sys.*, No. 18-0310 (6th Cir. Jan. 23, 2019) (order).

¹⁵ Class Cert Order, page 40.

¹⁶ *See* Class Cert Order, page 17 (citing *Halliburton Co. v. Erica P. John Fund, Inc.*, 134 S. Ct. 2398, 2408 (2014) (“*Halliburton II*”)).

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15. Plaintiff previously made two attempts to establish market efficiency, first offering the expert testimony of Dr. Greg Hallman (“Hallman”),¹⁷ who Plaintiff then replaced with Dr. Steven P. Feinstein (“Feinstein”).¹⁸ I filed reports critiquing the reports and analyses of both experts and concluded that each failed to establish that the market for Freddie Mac common stock was efficient during the Relevant Period.¹⁹ As noted above, the Court held that the Plaintiff failed sufficiently to establish market efficiency. The Court also granted Freddie Mac’s motion to strike Feinstein’s report and exclude the testimony of Feinstein.²⁰

16. At the Class Certification phase, in addition to market efficiency, I also analyzed and opined on the issue of “price impact.” I concluded that the alleged misrepresentations and omissions had no impact on the price of Freddie Mac’s common stock over the Relevant Period.²¹ The Court agreed. The Class Cert Order noted that “where plaintiffs have sufficiently established market efficiency, defendants may rebut the presumption of reliance with evidence of a lack of price impact” and found that my report “demonstrates that the alleged misstatements in the case at bar did not impact Freddie Mac’s stock price, rebutting the presumption of reliance.”²²

17. Now, OPERS, pursuing this case as an individual action, has offered a third and new economic expert, Dr. David Tabak (“Tabak”), who filed a report dated November 16, 2023.²³ Tabak opines that “if asked,” he “would be able to provide an opinion that loss causation existed” and “if asked,” he would be able to “calculate damages.”²⁴ Tabak clarified in his deposition that his opinion on loss causation is “that the alleged misrepresentations and omissions in this case did cause plaintiffs’ alleged losses.”²⁵ Regarding materiality, he concludes that “there is evidence in

¹⁷ Expert Report of Dr. Greg Hallman, August 16, 2012.

¹⁸ See Declaration of Professor Steven P. Feinstein, December 16, 2016; Report on Market Efficiency Professor Steven P. Feinstein, June 7, 2017.

¹⁹ See Expert Report of Mukesh Bajaj, Ph.D., December 14, 2012; Expert Report of Mukesh Bajaj, Ph.D., September 1, 2017 (“2017 Bajaj Class Certification Report”).

²⁰ Class Cert Order, pages 2-15, 41.

²¹ 2017 Bajaj Class Certification Report, ¶16.

²² Class Cert Order, page 36.

²³ Expert Report of David I. Tabak, Ph.D., November 16, 2023 (“Tabak Report”).

²⁴ Tabak Report, ¶32.

²⁵ Deposition of David I. Tabak, December 20, 2023, (“Tabak Deposition”), at 53:8-18.

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the record that is relevant to an understanding of the effect of the alleged misrepresentations and omissions on the market's valuation of Freddie Mac" and that that evidence shows Freddie Mac's November 20, 2007 alleged corrective disclosure was "company-specific" news that "mattered to the market" that "would allow a trier of fact to conclude that those alleged misrepresentations and omissions were material."²⁶

18. Plaintiff has also filed a report by a former equity analyst covering Freddie Mac, Howard S. Shapiro ("Shapiro").²⁷ He opines that three of the "primary" categories of information important to him as an analyst of Freddie Mac were "[c]redit risk, underwriting, and the related factor of economic capital," and that information he learned and reviewed since November 20, 2007 "regarding those three topics with respect to Freddie Mac would have dramatically changed [his] analysis of Freddie Mac's financial health during the Relevant Period," and also "makes it clear that credit risk, underwriting issues, and issues relating to economic capital were all major factors contributing to" Freddie Mac's losses reported that day.²⁸

19. I have been asked by Freddie Mac's counsel to review and comment on these opinions in the Tabak and Shapiro reports, from an economic perspective, as they relate to the issues of materiality, loss causation, and damages. I have also been asked: (a) to review the economic evidence as it relates to the Plaintiff's allegations that alleged misrepresentations and omissions caused losses to OPERS over the Relevant Period, and (b) to review the Freddie Mac stock trading behavior of Individual Defendants²⁹ over the Relevant Period in light of the TAC's claim that Defendants' alleged "fraudulent scheme"³⁰ allowed certain Freddie Mac executives to "implement insider trading incentives"³¹ selling "well over 100,000 shares" to avoid the price decline on

²⁶ Tabak Report, ¶¶3, 24, 35-36.

²⁷ Expert Report of Howard S. Shapiro, November 17, 2023 ("Shapiro Report").

²⁸ Shapiro Report, ¶3.

²⁹ The Individual Defendants are former Freddie Mac executives Richard F. Syron, Patricia L. Cook, Anthony S. Pizsel, and Eugene M. McQuade.

³⁰ TAC, ¶271.

³¹ TAC, ¶7.

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November 20, 2007.³²

20. It is my understanding from counsel that it is Plaintiff's burden to prove "materiality" and "loss causation" — "a causal connection between the defendants' alleged misrepresentations and the plaintiffs' economic losses"³³ — in order to claim damages. In this report I analyze and evaluate, from an economic perspective, materiality and loss causation and the related economic evidence.

21. I have been asked by counsel for Freddie Mac to be prepared to offer the opinions I previously offered at the class certification stage of this case at trial, if necessary and appropriate. I am prepared to do so, and I accordingly incorporate my opinions in those reports by reference.

III. Summary of Opinions

22. Based on my expertise and experience as a financial economist and my analysis described in this report, I have reached the following primary opinions:

- 1) Contrary to the claims in the TAC, my analysis shows that the alleged misrepresentations and omissions did not have a statistically significant stock price impact and did not cause losses to OPERS. While Freddie Mac's stock declined on November 20, 2007 after Freddie Mac announced losses of \$2 billion for its Q3 2007 and projected further losses in subsequent quarters, these losses and the price decline were related to the realization of previously disclosed risks of mortgage exposure. Such risks were realized given the rapidly deteriorating market conditions precipitated by an unprecedented residential real estate meltdown which sparked an unforeseen broader financial crisis. Shapiro predicted, in October 2007, that Freddie Mac would announce substantial losses in November 2007, evidencing the fact that those losses were the result of disclosed risks. More importantly, viewing the November 20, 2007 price

³² TAC, ¶242.

³³ *Halliburton II*, 134 S. Ct. at 2415.

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decline in isolation is an incomplete and biased view of the market reaction to the information the Company reported that day. A major market concern on that day related to Freddie Mac's need to raise dilutive capital to meet regulatory requirements after analysts inferred from Company statements that day that its regulator OFHEO would not give relief on this requirement. Freddie Mac needed sufficient regulatory capital to meet its capital requirement and fulfill its mission to support struggling mortgage markets. Lack of sufficient capital would erode Freddie Mac's competitive position and potentially impair its future business prospects. However, these capital related concerns were alleviated by November 30, 2007 when Freddie Mac successfully raised capital on overall favorable terms and Freddie Mac's stock price largely recovered.

- 2) Tabak's opinion that the alleged misrepresentations and omissions caused losses to OPERS is not reliable because it is based on insufficient facts, flawed and/or unsubstantiated assumptions, and an unreliable methodology. Other than simply assuming that November 20, 2007 represented a corrective disclosure and materialization of allegedly concealed risks, Tabak did no analysis of, nor has he even reviewed, Freddie's Mac alleged November 20, 2007 corrective disclosure at issue or any of Freddie's Mac prior detailed disclosures about risks of its mortgage exposure. He admits he made no effort to disentangle the complex, potentially confounding non-allegation-related information released that day which could have caused the price decline, nor did he undertake any effort to tie specific information released by Freddie Mac to the materialization of allegedly concealed risks related to subprime and non-traditional mortgage³⁴ exposure rather than the materialization of known risks related

³⁴ "Nontraditional" mortgage loans do not have a fixed definition, but generally refer to loans that are different than traditional fixed rate interest mortgage loans, including but not limited to interest-only mortgage loans, Alt-A mortgage loans and payment-option adjustable rate ("ARM") loans. *See* Appendix 3 (Defendants' Glossary of Terms, ECF No. 320) at 4.

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to this exposure. The only “analysis” he offers is an interpretation of an irrelevant and inapplicable analysis of announcements of losses by other financial institutions that was performed by another consultant for Plaintiff. That original analysis contained numerous errors, and even after Tabak supposedly corrected some errors, he made new, fundamental errors. To claim loss causation, Tabak also proffers a hypothetical example involving hidden “lottery tickets,” which he admits is an “oversimplification.” His admitted “oversimplification” proves nothing about loss causation in this matter as it does not apply to the facts of this case and his theory is also inconsistent with the TAC and plaintiff’s other expert, Shapiro. Overall, Tabak’s loss causation opinion amounts to him effectively assuming his conclusion.

- 3) Tabak did not calculate damages, and I am therefore unable to comment on any actual damages calculation. Nonetheless, Tabak’s opinion that he could calculate damages, “if asked,” is not and would not be reliable as stated because it is based on insufficient facts, flawed and/or unsubstantiated assumptions, and an unreliable proposed methodology. By his own admission, his approach to a damages calculation is crucially dependent on the unsubstantiated assumption of the “fundamental” form of semi-strong market efficiency for Freddie Mac’s stock over the Relevant Period which Tabak did not analyze, let alone establish. In fact, as the Class Cert Order found, OPERS failed to establish even a weaker standard of “informational” (as against fundamental) semi-strong market efficiency.
- 4) The Shapiro Report does not offer scientific, rebuttable, or testable analysis to support its opinions, makes claims inconsistent with Freddie Mac disclosures during the Relevant Period about “non-traditional” mortgage exposure, and offers opinions that contradict Tabak’s assumptions.

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5) My analysis of Freddie Mac executives' stock trading behavior over the Relevant Period shows that the individual Defendants did not engage in trading in Freddie Mac securities that was unusual or suspicious in timing or amount. They did not benefit from the alleged fraud during the Relevant Period. Rather, their holdings in Freddie Mac stock declined substantially over the course of the Relevant Period.

23. I explain the bases for these opinions below. In addition, attached to this report are Appendices and Exhibits that include information referenced herein and analyses that further support my opinions. These Appendices and Exhibits are as follows:

- Appendix 1: Curriculum Vitae of Mukesh Bajaj
- Appendix 2: Documents Considered
- Appendix 3: Defendants' Glossary of Terms
- Appendix 4: Market Model Description
- Exhibit 1: Case Shiller "Nominal" U.S. Home Price Index (1990 - 2008)
- Exhibit 2: Monthly FHFA House Price Index, Seasonally Adjusted Year-Over-Year Change in Monthly Values (1995 - 2008)
- Exhibit 3: TED Spread (2006 - 2007)
- Exhibit 4: Bloomberg U.S. Agency Fixed Rate MBS Average OAS (2006 - 2007)
- Exhibit 5: Chicago Board Options Exchange Volatility Index ("VIX") and Freddie Mac 30-day Implied Volatility (2006 - 2007)
- Exhibit 6: Tabak Appendix 1 Analysis
- Exhibits 7A – D: Details of individual Defendants' trading activity in Freddie Mac stock during the Relevant Period
- Exhibit A.1: Market Model Raw Data

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IV. Economic Background

A. Freddie Mac and the U.S. home mortgage market in 2006/2007

1. Freddie Mac general background

24. I understand that Freddie Mac has retained another expert, Dr. Chudozie Okongwu, to among other things, explain some aspects of mortgage loan terminology and discuss the prevailing conditions in the mortgage and housing markets during the Relevant Period. I have been instructed by counsel to assume the facts set forth in his report to be true. I have reviewed the report of Dr. Okongwu and I may rely on facts set forth therein. To support my opinion, I also summarize here some of the background facts regarding Freddie Mac's business and market events leading up to and during the Relevant Period.

25. Freddie Mac is a Government Sponsored Entity ("GSE") chartered by Congress in 1970 to "provide liquidity, stability, and affordability to the U.S. housing market."³⁵ Freddie Mac supported public policy goals of broader home ownership.³⁶

26. Freddie Mac carried out its mission and generated income through two main business activities: "credit guarantee activities" and "investment activities."³⁷ The credit guarantee activities involved buying lender-originated residential mortgage loans, packaging them into mortgage-backed securities ("MBS"),³⁸ guaranteeing these securities, and then selling them to investors. Freddie Mac guaranteed that investors in these MBS would receive timely payments of principal and interest thereby assuming the risk of underlying mortgage borrower default. In

³⁵ Freddie Mac Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2006, March 23, 2007 ("Freddie Mac 2006 Annual Report"), page 1. *See also* Federal Home Finance Agency Office of Inspector General, *A Brief History Of The Housing Government-Sponsored Enterprises*, <https://www.fhfa.ig.gov/Content/Files/History%20of%20the%20Government%20Sponsored%20Enterprises.pdf>.

³⁶ Freddie Mac 2006 Annual Report, page 1.

³⁷ Freddie Mac 2006 Annual Report, page 3.

³⁸ These MBS included mortgage pass-through or "participation" certificates which are referred to as "PCs" in Freddie Mac's Annual and other financial reports. *See, e.g.*, Freddie Mac 2006 Annual Report, pages 4-5.

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exchange for bearing this risk Freddie Mac earned income by charging investors a fee.³⁹ Freddie Mac's investment activities involved purchasing and holding whole (unsecuritized) mortgage loans, holding its own packaged MBS, and purchasing MBS not created by Freddie Mac which included both "agency" ("mortgage-related securities issued by GSEs or government agencies" with GSE payment guarantees) and "non-agency" MBS (MBS issued by private entities not carrying a GSE guarantee).⁴⁰ The retained securities were recorded as assets on Freddie Mac's balance sheet.⁴¹

27. As of December 31, 2006, Freddie Mac was one of the "largest purchasers of mortgage loans in the U.S.," and its total mortgage portfolio was \$1.8 trillion, or about 16% of the total \$10.9 trillion U.S. residential mortgage debt outstanding.⁴²

28. Although Freddie Mac was chartered by Congress, it funded itself and financed operations with private capital, including common stock, preferred stock and debt securities, and was responsible for making payments on these securities.⁴³

29. As a GSE, Freddie Mac was regulated by the U.S. Department of Housing and Urban Development ("HUD") and the Office of Federal Housing Enterprise Oversight ("OFHEO").⁴⁴ Freddie Mac's regulators placed limitations on terms and principal amounts of loans and securities that could be purchased and/or guaranteed.⁴⁵ Freddie Mac was subject to "affordable housing

³⁹ Freddie Mac 2006 Annual Report, page 4.

⁴⁰ For the retained portfolio, Freddie Mac invested in both "agency securities" ("mortgage-related securities issued by GSEs or government agencies") and "non-agency mortgage-related securities" (also sometimes called "private-label" RMBS). Freddie Mac 2006 Annual Report, page 4; *see also* page 41 (Table 19).

⁴¹ Freddie Mac 2006 Annual Report, pages 40-41.

⁴² Freddie Mac 2006 Annual Report, pages 1-2.

⁴³ Freddie Mac 2006 Annual Report, pages 1, 4.

⁴⁴ Freddie Mac 2006 Annual Report, pages 6-9.

⁴⁵ *See, e.g.*, Freddie Mac 2006 Annual Report, page 3 ("Our charter establishes general parameters for the terms and principal amounts of the mortgages we may purchase Within our charter parameters, the residential mortgage loans we purchase or that underlie mortgage-related securities we purchase generally fall into one of two categories: Single-Family Mortgages. Single-family mortgages are secured by one- to four-family

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goals set by HUD” that are “intended to expand housing opportunities for low-and moderate income families.”⁴⁶ OFHEO, the “safety and soundness regulator for Freddie Mac,” as of 2004 required Freddie Mac to “maintain a mandatory target capital surplus of 30 percent over [its] minimum capital requirement, subject to certain conditions and variations” and that Freddie Mac “submit weekly reports” on capital levels.⁴⁷ This regulatory capital requirement involved maintaining certain amounts of “Core capital” and “Total capital.” Core capital consisted of “the par value of outstanding common stock (common stock issues less common stock held in treasury), the par value of outstanding non-cumulative, perpetual preferred stock, additional paid-in capital and retained earnings, as determined in accordance with GAAP.”⁴⁸ Freddie Mac had to hold an amount of Core capital that was “the sum of 2.50 percent of aggregate on-balance sheet assets and approximately 0.45 percent of the sum of outstanding mortgage related securities [Freddie Mac] guaranteed and other aggregate off-balance sheet obligations.”⁴⁹ As noted, in 2004 OFHEO required Freddie Mac to maintain a mandatory target capital surplus of 30 percent over the minimum capital requirement.

30. Freddie Mac’s principal competitors in the secondary mortgage market were Federal National Mortgage Association (“Fannie Mae”), a similarly chartered GSE also regulated by HUD and OFHEO, the Federal Home Loan Banks,⁵⁰ and other financial institutions that retain or

properties. The types of single-family mortgages we purchase include 40-year, 30-year, 20-year, 15-year and 10-year fixed-rate mortgages, interest-only mortgages, adjustable-rate mortgages, or ARMs, and balloon/reset mortgages.”); page 4 (“In response to a request by the Office of Federal Housing Enterprise Oversight, or OFHEO, we announced on August 1, 2006 that we would voluntarily limit the growth of our Retained portfolio to no more than 2.0 percent annually (and 0.5 percent quarterly on a cumulative basis), based on its carrying value as contained in our minimum capital report to OFHEO filed on July 28, 2006, which was \$710.3 billion.”).

⁴⁶ Freddie Mac 2006 Annual Report, page 6.

⁴⁷ Freddie Mac 2006 Annual Report, pages 8-9.

⁴⁸ Freddie Mac 2006 Annual Report, page 129.

⁴⁹ Freddie Mac 2006 Annual Report, page 129.

⁵⁰ The Federal Home Loan Bank System was created in the 1930s to “serve as a reserve credit system to support housing finance and provide relief to troubled homeowners and lending institutions.” Federal Home Finance Agency Office of Inspector General, *A Brief History Of The Housing Government-Sponsored Enterprises*, page 1, <https://www.fhfaoig.gov/Content/Files/History%20of%20the%20Government%20Sponsored%20Enterprises.pdf>.

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securitize mortgages, such as commercial and investment banks, dealers and thrift institutions.⁵¹ Freddie Mac's closest competitor was Fannie Mae, which had a very similar business model to Freddie Mac,^{52,53} and which was subject to similar economic and regulatory forces, including the 30% OFHEO capital requirement.⁵⁴

2. Freddie Mac and the U.S. home mortgage market in 2006 and 2007

31. Leading up to the Relevant Period, U.S. home prices had steadily increased over the last decade. Economist Robert Shiller noted that U.S. “[h]ome prices rose about 85% from 1997 to 2006 adjusted for inflation, the biggest national housing boom in U.S. history.”⁵⁵ I understand that Dr. Okongwu has summarized facts relating to home prices and the risks to Freddie Mac relating to the decline in home price appreciation in his report (the “Okongwu Report”), and I assume the facts that he set forth on those issues to be true.

32. The rise in home prices was one of the factors that led to the proliferation of non-traditional mortgage products, also called alternative mortgage products. I understand that Dr. Okongwu has summarized facts relating to the proliferation of non-traditional mortgage products and the subprime market in the Okongwu Report, and I assume the facts that he set forth on those issues to be true.

33. Freddie Mac also discussed the risks posed by a decline in home price appreciation, its

⁵¹ Freddie Mac 2006 Annual Report, page 3.

⁵² Fox-Pitt Kelton, “Fannie Mae, Freddie Mac: Gulliver freed from the Lilliputians,” August 22, 2007, page 8 (FMOPERS00116548) (“Fannie Mae and Freddie Mac have essentially two business lines, each of which stem from their charter requirements and the need to maintain liquidity in the mortgage markets. The first is their portfolio management business, in which the companies buy mortgages or mortgage-backed securities for investment, earn a spread on those investments and manage the resulting interest rate risk. The second business line is the credit guaranty business, in which guaranty the payment of principal and interest risk in return for a fee (called the “guaranty fee”) paid from the mortgage coupon.”)

⁵³ I note that Tabak admitted in his deposition that Fannie Mae was the most similar company to Freddie Mac in “terms of its business.” Tabak Deposition, at 227:8-11.

⁵⁴ Fannie Mae Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2005, dated May 2, 2007 (“Fannie Mae 2005 Annual Report”), page 1; Freddie Mac 2006 Annual Report, pages 6-9.

⁵⁵ See *The Wall Street Journal*, “Yale’s Shiller: U.S. Housing Slump May Exceed Great Depression,” April 22, 2008.

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increased participation in the non-traditional mortgage markets in its disclosures, and the risks posed by that increased participation. In particular, with respect to its increased purchases of interest-only loans and option ARMs, it disclosed in its 2006 Annual Report the risks these products pose: “We expect each of these products to default more often than traditional products and we consider this when determining our credit and guarantee fees.”⁵⁶

34. In its Q2 2007 Information Supplement, Freddie Mac detailed that its exposure to interest only loans in its single-family mortgage portfolio related to its guarantee activities (“Single Family Guarantee Portfolio”) was about 8% or about \$128 billion and its exposure to Option ARMs in that portfolio was about 1%, or about \$16 billion.⁵⁷ Freddie Mac also disclosed that loans classified as “Alt-A” were about \$120 billion, or eight percent, of the total Single Family Guarantee Portfolio and that “[f]or these loans, our average credit score was 715 and our estimated current LTV ratios were 71 percent.”⁵⁸

35. Freddie Mac also further disclosed details regarding the credit characteristics of the loans in its Single Family Guarantee Portfolio loans showing borrowers with FICO credit scores less than 620 and 620-659, reporting, for example, that as of Q2 2007, 4% was to borrowers with credit scores below 620 and 9% was to borrowers with credit scores between 620 and 659.⁵⁹ Equity analysts covering Freddie Mac compared the “below 620” loans to the broader market of non-conforming “subprime” loans, noting the superior performance of Freddie Mac’s loans.⁶⁰

⁵⁶ Freddie Mac Financial Report for the Three and Six Months Ended June 30, 2007, dated August 30, 2007 (“Q2 2007 Information Supplement”), page 34.

⁵⁷ Q2 2007 Information Supplement, Table 22 -- Characteristics of Single-Family Mortgage Portfolio (footnote 1 showing “ending balances included in the data totaled \$1,599 billion” as of June 30, 2007) and Table 23 - Product Distribution.

⁵⁸ Q2 2007 Information Supplement, page 34.

⁵⁹ Q2 2007 Information Supplement, Table 22. Freddie Mac reported similar details in earlier reports, like its 2006 Annual Report.

⁶⁰ *See, e.g.*, Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007, page 2, (“Credit quality is deteriorating, reflecting the company’s exposure to recent vintage high LTV, low FICO, and Alt A loans. Still, we estimate that Freddie Mac’s credit risk is significantly below that reflected by non-conforming mortgages and by the market overall. For example, the delinquency rate on Freddie Mac’s low FICO score risk of 2.86% at September 30 is significantly below an average of over 20% for outstanding non-conforming subprime mortgages.”).

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36. For the retained portfolio, Freddie Mac disclosed that “at June 30, 2007 and December 31, 2006, we held investments of approximately \$119 billion and \$124 billion, respectively, of non-agency mortgage-related securities backed by subprime loans” and “[w]e believe that \$55 billion and \$54 billion of our single-family non-agency mortgage-related securities that are not backed by subprime loans are generally backed by Alt-A mortgage loans at June 30, 2007 and December 31, 2006, respectively.”⁶¹

37. As Freddie Mac’s involvement in the “non-traditional” mortgage market grew it explained both the risks⁶² and benefits,⁶³ including helping it meet affordable housing goals.

B. Economic events of 2007: Subprime mortgage sector problems morph into unforeseen broader credit crisis and “what may be the worst housing downturn since the Great Depression”⁶⁴

38. In 2007, leading up to November 20, 2007, the U.S. residential real estate market, and eventually broader financial markets deteriorated dramatically after over a decade of consistent home price appreciation and home mortgage market expansion. What began as a housing downturn primarily in the “subprime” sector and seen as “contained,”⁶⁵ eventually morphed in August 2007 into a broader global liquidity “crunch” in certain large financial markets (including

⁶¹ Freddie Mac Q2 2007 Information Supplement, page 34.

⁶² See, e.g., Freddie Mac 2006 Annual Report, page 69 (“During the past several years, there was a rapid proliferation of nontraditional mortgage product types designed to address a variety of borrower and lender needs, including issues of affordability and reduced income documentation requirements. While features of these products have been on the market for some time, their prevalence in the market and our Total mortgage portfolio increased in 2006 and 2005. ... We expect each of these products to default more often than traditional products and we consider this when determining our credit and guarantee fees.”). See also Section IV.C below.

⁶³ See, e.g., Freddie Mac Guidance Announcement Conference Call Transcript, March 31, 2006, pages 3, 13 (noting increased involvement in non-traditional mortgages is both “good for business” and would help it achieve its affordable housing goals by providing liquidity to the “full range of the mortgage market.”).

⁶⁴ Morgan Stanley, “Mortgage Finance: In the long term, pricing trumps losses, but the short-term could still be volatile,” October 26, 2007, page 3.

⁶⁵ See, e.g., *Reuters News*, “Treasury’s Paulson Sees Housing Downturn Contained,” March 28, 2007.

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the \$10 trillion dollar “repo” market⁶⁶) and financial panic, prompting emergency stabilizing actions from central banks around the world. Despite these policy actions, conditions worsened in the last quarter of 2007 and continued to deteriorate into 2008, culminating in what is now called the “Great Recession,” the “most severe financial crisis since the Great Depression” of the 1930s.⁶⁷ Home prices fell nationwide over 30%, unemployment levels reached 10%, and the U.S. stock market fell 55% with \$8 trillion of wealth lost “between October 2007, when the stock market reached an all-time high, and October 2008.”⁶⁸ As Great Depression scholar and then Federal Reserve Chairman Mr. Ben Bernanke noted in 2010 (with the benefit of hindsight), “[t]he financial crisis that began in August 2007 has been the most severe of the post-World War II era and, very possibly--once one takes into account the global scope of the crisis, its broad effects on a range of markets and institutions, and the number of systemically critical financial institutions that failed

⁶⁶ The “repo” market was part of what is commonly referred to as the “alternative”, “parallel”, or “shadow” banking sector. This sector is considered the set of institutions (such as SIVs, “conduits,” and hedge funds) and markets (like the “repo” or “repurchase” financing market) which perform bank-like functions of taking deposits and extending credit but exist outside the traditional regulated banking system. As Gary B. Gorton “Questions and Answers About the Financial Crisis,” NBER Working Paper Series, *National Bureau of Economic Research*, February 2010 (“Gorton (2010)”) notes: “This banking system (the ‘shadow’ or ‘parallel’ banking system) -- repo based on securitization -- is a genuine banking system, as large as the traditional, regulated and banking system. It is of critical importance to the economy because it is the funding basis for the traditional banking system. Without it, traditional banks will not lend and credit, which is essential for job creation, will not be created.” The size of the repo market in 2007 is not precisely known but has been estimated to be as large as \$10 trillion (roughly the size of the total assets of the U.S. banking sector) [See, e.g., Arvind Krishnamurthy, “How Debt Markets Have Malfunctioned in the Crisis,” *Journal of Economic Perspectives*, Volume 24, No. 1, Winter 2010, pages 3-28 (“Krishnamurthy (2010)”), page 8; Gorton (2010); and Timothy F. Geithner, “Reducing Systemic Risk in a Dynamic Financial System,” Remarks at The Economic Club of New York, New York City, June 9, 2008].

⁶⁷ See, e.g., Markus K. Brunnermeier, “Deciphering the Liquidity and Credit Crunch 2007-08,” *Journal of Economic Perspectives*, Volume 23, No. 1, 2009, pages 77-100 (“Brunnermeier (2009)”).

⁶⁸ See N. Gregory Mankiw and Laurence Ball, “Macroeconomics and the Financial System,” *Worth Publishers*, First Edition 2011, Chapter 19 (2011) (“Mankiw and Ball (2011)”) (“**The U.S. Financial Crisis of 2007–2009** ... The United States experienced a 55 percent fall in the stock market, the failures of some of the country’s most prestigious financial institutions, and a disruption in lending throughout the economy. The worst recession since the 1930s pushed the unemployment rate from under 5 percent in 2007 to over 10 percent in late 2009.”); CoreLogic Special Report, *Evaluating the Housing Market Since the Great Recession*, February 2018, page 4 (noting housing prices fell “33 percent during the recession”); Brunnermeier (2009), page 89.

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or came close to failure--the worst in modern history.”⁶⁹

39. Dr. Okongwu has also summarized facts relating to these market conditions in the Okongwu Report, and I assume the facts that he set forth on those issues to be true.

1. 2006 to mid-2007: “Subprime” downturn seen as “contained.”

40. As of May 2007, after rising “at an annual rate of nearly 9 percent from 2000 through 2005” home prices had decelerated and even declined in parts of the U.S., resulting in growing subprime mortgage defaults as borrowers were unable to refinance their ARMs prior to reset.⁷⁰ Exhibit 1 plots the Inflation Adjusted Case Shiller Home Price index and Exhibit 2 plots the monthly “year-over-year” change in the nominal Freddie Mac U.S. House Price Index (formerly “OFEHO Index”). These Exhibits show that after over a decade of steady “unprecedented” increases described, as noted above, by economist Robert Shiller as “the biggest national housing boom in U.S. history,”⁷¹ growth in national home prices began to slow in 2005, and by 2007 prices began to decline year over year.

41. Along with home price declines, foreclosures and 90-day delinquency rates in adjustable-rate subprime mortgages (which accounted for two-thirds of all first-lien subprime mortgages) had increased “sharply” in 2006 to 11%, “about double the recent low seen in mid-2005.”⁷²

42. Despite this housing market downturn, these problems, primarily in the subprime sector, were viewed as self-contained by many observers, including then U.S. Treasury Secretary Henry Paulson who observed in his testimony before the U.S. Congress that in his view, the

⁶⁹ Ben S. Bernanke, “Monetary Policy and the Housing Bubble,” Annual Meeting of the American Economic Association, January 3, 2010.

<https://www.federalreserve.gov/newsevents/speech/bernanke20100103a.htm>.

⁷⁰ Ben S. Bernanke, “The Subprime Mortgage Market,” Speech at the Federal Reserve Bank of Chicago’s 43rd Annual Conference on Bank Structure and Competition, Chicago, Illinois, May 17, 2007 (“Bernanke (May 17, 2007)”).

⁷¹ See *The Wall Street Journal*, “Yale’s Shiller: U.S. Housing Slump May Exceed Great Depression,” April 22, 2008.

⁷² Bernanke (May 17, 2007).

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economic damage from the housing downturn was “contained” and the decline in home prices appeared to have bottomed-out,⁷³ and Chairman Bernanke who did not expect “significant spillovers from the subprime market to the rest of the economy or to the financial system.”⁷⁴

2. August 2007: Liquidity crisis and financial panic suddenly erupts.

43. In July 2007, some “warning signs” in the economy had emerged, including the failure of two large Bear Stearns hedge funds heavily exposed to mortgage-backed derivative securities that created uncertainty which began to disrupt wider credit markets.⁷⁵ As the decade long “boom” in home prices was ending and delinquencies and losses on subprime and other mortgages rose, “banks started to worry about one another.”⁷⁶

44. However, it was not until Thursday, August 9, 2007, that global credit markets suddenly became ensnared in the throes of a severe and unforeseen credit crisis.⁷⁷ That morning, the investment bank unit of France’s largest bank, BNP Paribas, announced that it had frozen redemptions for three investment funds and that, “[t]he complete evaporation of liquidity in certain market segments of the US securitisation market has made it impossible to value certain assets fairly regardless of their quality or credit rating.”⁷⁸ BNP Paribas’ comments ignited “fears of a

⁷³ *Reuters News*, “Treasury’s Paulson Sees Housing Downturn Contained,” March 28, 2007.

⁷⁴ Bernanke (May 17, 2007).

⁷⁵ *See, e.g., Reuters News*, “EURO CORP-Crossover widens sharply as subprime strikes again,” July 18, 2007.

⁷⁶ Mankiw and Ball (2019), page 547.

⁷⁷ *See, e.g.,* Joint Economic Committee United States Congress, THE U.S. HOUSING BUBBLE AND THE GLOBAL FINANCIAL CRISIS: VULNERABILITIES OF THE ALTERNATIVE FINANCIAL SYSTEM, June 2008 (“On August 9, 2007, BNP-Paribas ignited a severe global financial crisis when BNP-Paribas suspended cash redemptions from three of its hedge funds because of uncertainty about the value of subprime-related RMBS and tranches of subprime-related CMOs in these funds.”) and Brunnermeier (2009), page 85. Some commentators assert that August 9, 2007 marks start of a new regime. A few days later, Northern Rock, the British lender was rescued from collapse by the Bank of England. Looking back, Adam Applegarth, then chief executive of Northern rock, said that August 9, 2007 “is the day the world changed.” *The Guardian*, “The day the credit crunch began, 10 years on: ‘the world changed’,” August 3, 2017, 02:25 ET.

⁷⁸ BNP Paribas Press Release, “BNP Paribas Investment Partners temporarily suspends the calculation of the Net Asset Value of the following funds: Parvest Dynamic ABS, BNP Paribas ABS EURIBOR and BNP Paribas ABS EONIA,” August 9, 2007.

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credit crunch”⁷⁹ and “unprecedented disruptions” in financial markets.⁸⁰

45. This contagion led to the sudden increase in various interest rate spreads. For instance, the TED spread (which measures the difference between the risky LIBOR rate and the risk-free U.S. Treasury bill rate and “widens in times of crises”⁸¹) widened dramatically, increasing from 55 basis points (bps)⁸² on August 8, 2007 to 242.5 bps, on August 20, 2007, a change of 340%. See Exhibit 3. That same day, central banks around the world took emergency actions and injected billions into the banking system, including the largest-ever emergency operation by the European Central Bank (ECB).⁸³

46. This eruption of illiquidity and counterparty uncertainty also led to the freezing up and “panic” in the massive, multi-trillion-dollar asset-backed commercial paper (“ABCP”)⁸⁴ and repurchase (“Repo”) markets,⁸⁵ key sources of funding for the banking system.⁸⁶

47. These developments also coincided with a market-wide increase in the price of risk, and a dramatic drop in the market value of securitized assets as reflected in the sharp increase in

⁷⁹ *Reuters News*, “Europe shares fall as BNP Paribas spooks investors,” August 9, 2007, 11:37.

⁸⁰ *Dow Jones News Service*, “WSJ: Countrywide: Co [sic] Faces ‘Unprecedented Disruptions,’” August 9, 2007. See also Brunnermeier (2009), page 85.

⁸¹ Brunnermeier (2009), page 85.

⁸² One percent equals 100 basis points.

⁸³ See, e.g., Brunnermeier (2009) (“In response to the freezing up of the interbank market on August 9, the European Central Bank injected €95 billion in overnight credit into the interbank market. The U.S. Federal Reserve followed suit, injecting \$24 billion.”); *Associated Press Newswires*, “ECB steps in to ease market fears by expanding cash,” August 9, 2007; *The Street.com*, “Fed, ECB Respond to Credit Crunch,” August 9, 2007; and *Associated Press Newswires*, “World Stocks Plunge on Credit Fears,” August 10, 2007.

⁸⁴ ABCP stands for asset-backed commercial paper. As of January 2007, commercial paper was the largest U.S. short-term debt instrument with \$1.97 trillion outstanding of which 57% was asset-backed. [Marcin Kacperczyk, and Philipp Schnabl, “When Safe Proved Risky: Commercial Paper during the Financial Crisis of 2007–2009”, *Journal of Economic Perspectives*, Volume 24, No. 1, Winter 2010, pages 29-50. (“Kacperczyk and Schnabl (2010)”)]

⁸⁵ The “run on repo” in 2007 was essentially a bank panic in the \$10 trillion repo (or “repurchase”) loan market that hedge funds and broker-dealers like Bear Stearns, Lehman Brothers, and others used to finance their trading and other daily operations. The size of the repo market in 2007 is not precisely known but has been estimated to be as large as \$10 trillion (roughly the size of the total assets of the U.S. banking sector) [See, Krishnamurthy (2010), page 8; Gorton (2010); and Timothy F. Geithner, “Reducing Systemic Risk in a Dynamic Financial System,” Remarks at The Economic Club of New York, New York City, June 9, 2008].

⁸⁶ Tobias Adrian, Christopher R. Burke, and James J. McAndrews, “The Federal Reserve’s Primary Dealer Credit Facility,” *Federal Reserve Bank of New York, Current Issues in Economics and Finance*, Volume 15, No. 4, August 2009.

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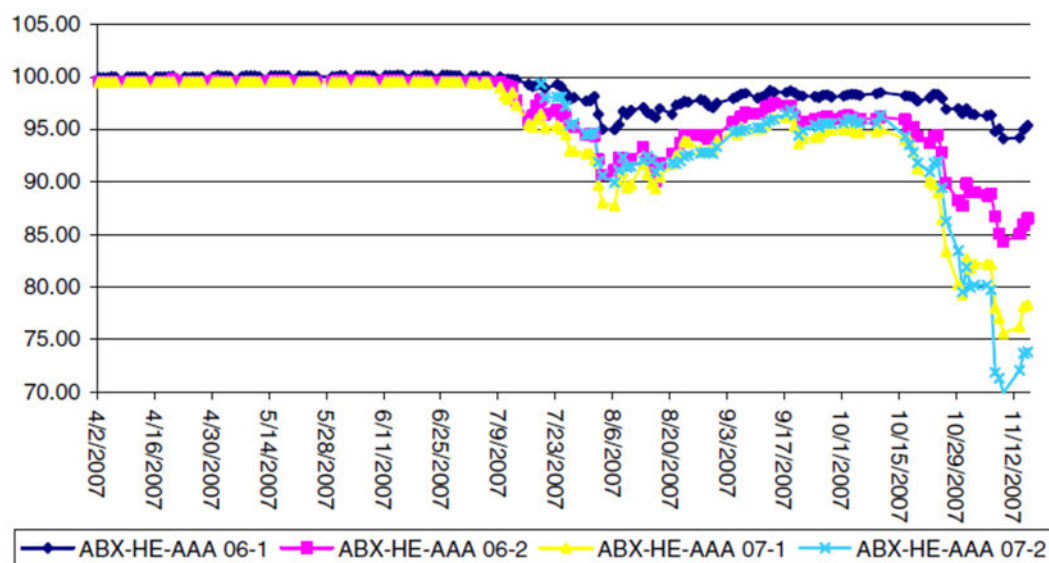
various mortgage-backed security and other asset spreads. For example, Exhibit 4 shows the increase in the Agency Option Adjusted Spread (OAS) over the Relevant Period, especially in the second half of 2007. This was a key credit spread for Freddie Mac, which as it disclosed, represented “basis risk” where increases could adversely affect the mark-to-market fair value of their mortgage portfolio and financial results.⁸⁷

48. Figure 1 obtained from a November 19, 2007 Credit Suisse analyst report following Freddie Mac also shows the decline in AAA ABX index prices in the second half of 2007 (simultaneously illustrating the increase in spreads which move inversely to prices) which tracked a basket of derivatives referencing recent vintage non-agency “subprime” RMBS.⁸⁸

⁸⁷ See, e.g., Freddie Mac 2006 Annual Report, pages 48 and 60 (explaining that the basis risk (“mortgage-to-debt option-adjusted spread risk”) is the “risk that interest rates in different market sectors will not move in tandem and will adversely affect shareholder value” and that “[t]his risk arises principally because we generally hedge mortgage-related investments with debt securities.”) Freddie Mac also disclosed that the fair value of its net assets “can be significantly affected from period to period by changes in the net [option-adjusted spread] between the mortgage and agency debt sectors.” I discuss Freddie Mac’s disclosures of this and other risks in more detail in Section IV.C below.

⁸⁸ Nomura Fixed Income Research, “Synthetic ABS 101: PAUG and ABX.HE,” March 7, 2005.

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Figure 1: ABX “Subprime” RMBS Pricing⁸⁹**Exhibit 1: ABX AAA Pricing**

49. The Credit Suisse analyst discussed “credit spread widening” and used this index to track the market value of Freddie Mac’s \$120 billion non-agency subprime RMBS holdings in the retained portfolio which was 99.9% rated AAA as of June 30, 2007.⁹⁰

50. The expected volatility of the stock market also increased, further indicating growing uncertainty in financial markets. Exhibit 5 shows the “VIX” index, a widely followed barometer of expected volatility in the U.S. stock market⁹¹ and Freddie Mac’s stock option implied volatility.⁹² Consistent with the increase in the VIX index, Freddie Mac’s stock also became more

⁸⁹ Reproduced from Credit Suisse, “Profitability Outlook Unfavorable; Are Security Impairments Down the Road?,” November 19, 2007.

⁹⁰ See Freddie Mac Q2 2007 Information Supplement, page 34.

⁹¹ VIX is the ticker symbol for the Chicago Board Options Exchange Volatility Index. The index is a “is a calculation designed to produce a measure of constant, 30-day expected volatility of the U.S. stock market, derived from real-time, mid-quote prices of S&P 500® Index (SPXSM) call and put options. On a global basis, it is one of the most recognized measures of volatility -- widely reported by financial media and closely followed by a variety of market participants as a daily market indicator.” [http://www.cboe.com/products/vix-index-volatility/vix-options-and-futures/vix-index, accessed as of January 15, 2024.]

⁹² Implied volatility is the future volatility estimate for Freddie Mac stock. The implied volatility that I report for Freddie Mac stock is computed by OptionMetrics, a well-known provider of such data, through prices of 30-day call options traded on the Company’s stock.

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volatile over this period.

51. As the private sector involvement in the mortgage market shrank amidst the financial turmoil, Freddie Mac and Fannie Mae's role as GSEs expanded. GSE support of the mortgage market grew to \$5 trillion in 2007, with market share of total mortgage originations increasing from 37.4 percent in 2006 to 75.6 percent by the fourth quarter of 2007.⁹³ As I discuss later, analysts following Freddie Mac were concerned that the 30% capital surplus threshold required by its regulator OFHEO amidst rapidly deteriorating market conditions, which would create GAAP mark-to-market and other accounting-related losses for Freddie Mac that would reduce capital levels, would prevent Freddie Mac from taking advantage of profitable business opportunities in this environment.

3. Market participants, forecasters, and regulators did not foresee the liquidity crisis and worsening economic turmoil.

52. Despite the downturn in the housing market leading up to the second half of 2007, market participants, economic forecasters, and government regulators did not foresee the complex spillover effect into a broader liquidity crisis and the worsening economic turmoil that followed. As economists Mankiw and Ball note in their Macroeconomics textbook:

[F]ew saw the subprime crisis as a threat to the entire financial system or economy. In mid-2007, economists estimated that financial institutions might lose a total of \$150 billion on subprime mortgages—not pocket change, but not a lot compared to the U.S. annual GDP of \$14 trillion.”⁹⁴

53. Indeed, as noted above, in the first half of 2007, then U.S. Treasury Secretary Henry Paulson thought the economic damage from the housing downturn was “contained” and the decline

⁹³ OFHEO 2008 Report to Congress, Office of Federal Housing Enterprise Oversight, pages ii-iii. *See also* “Changes in the Mortgage Market Since the Crisis,” *Federal Reserve Bank of St. Louis Review*, August 2011, noting that “remarkably, all private-label securitization of nonprime originations has disappeared since the collapse of both the subprime and Alt-A segments of the mortgage market. This raises the question of whether these market segments are viable without government support.”

⁹⁴ Mankiw and Ball (2011), page 547.

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in home prices appeared to have bottomed-out,⁹⁵ and Federal Reserve Chairman Bernanke similarly concluded in May 2007 that “the effect of the troubles in the subprime sector on the broader housing market will likely be limited, and we do not expect significant spillovers from the subprime market to the rest of the economy or to the financial system.”⁹⁶

54. This view shifted after the events of August 2007. On August 31, 2007, Federal Reserve Chairman Bernanke stated that “the financial stress has not been confined to mortgage markets” and that “[c]redit spreads for a range of financial instruments have widened.”⁹⁷ He concluded that “[a]lthough this episode appears to have been triggered largely by heightened concerns about subprime mortgages, global financial losses have far exceeded even the most pessimistic projections of credit losses on those loans.”

55. Perhaps the most direct way to observe the unforeseen spillover effect is to recognize the economic significance of the sudden spikes and volatile movements in the second half of 2007 in the “TED” spread. The sudden spike in these spreads on August 9, 2007 demonstrates the failure of market participants to predict the impact of problems in the subprime markets to other mortgage markets and the economy as a whole. If market participants in general had foreseen that impact, these spreads would have increased earlier.

C. Freddie Mac disclosures during the Relevant Period provided detailed information about the guaranteed and retained portfolios and reflected the changing mortgage market environment and growing risk.

56. Leading up to November 20, 2007, Freddie Mac disclosures during the Relevant Period provided detailed information about the composition of its guaranteed and retained portfolios, including the characteristics and amounts of non-traditional mortgages it held, and how this

⁹⁵ *Reuters News*, “Treasury’s Paulson Sees Housing Downturn Contained,” March 28, 2007.

⁹⁶ Bernanke (May 17, 2007).

⁹⁷ Ben Bernanke, “Housing, Housing Finance, and Monetary Policy,” Speech at the Federal Reserve Bank of Kansas City’s Economic Symposium, Jackson Hole, Wyoming, August 31, 2007.

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exposure changed across the quarterly financial reporting periods. These disclosures reflected the deteriorating mortgage market environment and growing risk. The disclosures highlighted several primary risk categories relevant to the allegations, including: mortgage credit risk (and provision for credit losses) and how this risk related to changing economic and mortgage market conditions, especially declining home prices; interest rate or “spread” risk -- in particular basis risk from changes in option-adjusted spreads (OAS) on MBS; and interest rate volatility risk.

1. Increase in exposure to non-traditional mortgages to “mirror more of the market”

57. Long before the market-wide problems discussed above evolved into a financial crisis, Freddie Mac informed investors it was increasing its exposure to non-traditional (or “alternative”) mortgages as these types of mortgages became more prevalent in the marketplace, disclosing that “[w]e expect each of these products to default more often than traditional products and we consider this when determining our credit and guarantee fees” and that “[o]ur purchases of interest-only and option ARM mortgage products increased in 2006, representing approximately 18 percent of our Total mortgage portfolio purchases as compared to 11 percent in 2005.”⁹⁸ In a March 31, 2006 conference call, Freddie Mac CEO Mr. Syron told analysts that this increased exposure to non-traditional mortgages was both good for business and would help Freddie Mac achieve its HUD mandated affordable housing goals by “mirror[ing] more of the market.”⁹⁹

58. The disclosures also reflected changing market conditions in 2007. Freddie Mac’s August 30, 2007 Q2 2007 Information Statement Supplement disclosed that:

Due to changes in market conditions during the first six months of 2007, the GSEs have had greater opportunity to compete with the non-agency securitization market and consequently have collectively increased market share during the six months ended June 30, 2007. ... Although the demand by borrowers for non-traditional mortgages, such as interest-only and option ARMs, remained strong, we did not purchase any option ARM products during the six months ended June 30, 2007, in

⁹⁸ Freddie Mac 2006 Annual Report, page 69.

⁹⁹ Freddie Mac Guidance Announcement Conference Call Transcript, March 31, 2006, page 13.

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*contrast to approximately \$6 billion of option ARM purchases during the six months ended June 30, 2006. Our purchases of interest-only mortgage loans during the six months ended June 30, 2007 and 2006, were 25 percent and 13 percent, respectively, of our total purchase volume.*¹⁰⁰

2. Mortgage credit risk and provision for credit losses

59. To enable investors to gauge its credit risk, Freddie Mac provided detailed economic characteristics of the mortgage loans underlying its guaranteed and retained portfolios, as well as data regarding past performance, expected future losses, and provisions for credit losses.

60. As Freddie Mac's 2005 Annual Report noted, it faced mortgage credit risk that a borrower might "fail to make timely payments on a mortgage or security [Freddie Mac] own[ed] or guarantee[d]." ¹⁰¹ This credit risk was elevated due to changing conditions in the mortgage market and the broader economy, and in particular declining home prices, which as noted above, deteriorated nationally at an unprecedented rate during the Relevant Period. As Freddie Mac noted in its August 30, 2007 Q2 2007 Information Supplement:

*The U.S. residential mortgage market continued to weaken during the three and six months ended June 30, 2007, as the rate of home price appreciation generally continued to decline, with significant variations across regions and metropolitan areas. Estimates of nationwide home price appreciation for the full year of 2007 vary widely, with most indicating a slight overall decline in home prices and others indicating low or no growth. We expect this trend to continue into 2008. Home price appreciation is an important market indicator for us because it reflects the general trend in value associated with the single-family mortgage loans underlying our mortgage Participation Certificates, or PCs, and Structured Securities. As home prices decline, the risk of borrower defaults and the severity of credit losses generally will increase.*¹⁰²

¹⁰⁰ Freddie Mac Q2 2007 Information Supplement, page 40 (underline added).

¹⁰¹ Freddie Mac Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2005, dated June 28, 2006 ("Freddie Mac 2005 Annual Report"), page 63. Freddie also disclosed that it faced "institutional credit risk" arising from "agreements with the following entities: mortgage loan insurers; mortgage seller/servicers; issuers, guarantors or third party providers of credit enhancements on non-Freddie Mac mortgage-related securities held in our Retained portfolio; mortgage investors and originators; and issuers, guarantors and insurers of investments held in both our Cash and investments portfolio." Freddie Mac 2006 Annual Report, page 78.

¹⁰² Q2 2007 Information Supplement, page 3 (emphasis added).

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61. In addition to the general economy and real estate market conditions, Freddie Mac's mortgage portfolio's credit risk was related to certain economic characteristics of mortgages within the portfolio, such as the "credit profile of the borrower on the mortgage, the features of the mortgage itself, [and] the type of property securing the mortgage."¹⁰³ Accordingly, the Company disclosed such key characteristics of its Single Family Guarantee Portfolio in detail.¹⁰⁴

62. Specifically, for its Single Family Guarantee Portfolio, Freddie Mac disclosed the proportion of its portfolio that belonged to particular credit score ranges (i.e., FICO scores), and (original and current) loan-to-value ratio ("LTV ratio") ranges. The Company also disclosed the proportion of its Single Family Guarantee Portfolio comprising loans for particular purposes (purchase or cash-out refinance, among others), loans for particular types of property (1 unit or 2-4 unit) and loans by occupancy type (primary residence, second/vacation home and investment).

63. These characteristics are widely recognized as key factors in assessing the credit risk related to mortgages.¹⁰⁵

64. For instance, Freddie Mac's disclosures were sufficient to enable an investor to calculate the share of the Company's Single Family Guarantee Portfolio that comprised loans to borrowers with FICO scores¹⁰⁶ less than 620 or 660 or the share dedicated to mortgages with LTV ratios above 80% or 90%. As an illustration, consider the Company's 2006 Annual Report where Freddie Mac disclosed that 10% and 5% of the single-family loans it had purchased during 2006 were loans made to borrowers with FICO scores from 620 to 659 and below 620, respectively.¹⁰⁷ By adding these two numbers (10% and 5%), an investor could determine that 15% of the

¹⁰³ Freddie Mac 2006 Annual Report, page 66.

¹⁰⁴ See, e.g., Freddie Mac 2005 Annual Report, Table 37, page 67 and Freddie Mac 2006 Annual Report, Table 38, page 70.

¹⁰⁵ See, e.g., Robert B. Avery, Raphael W. Bostic, Paul S. Calem, and Glenn B. Canner (1996), "Credit Risk, Credit Scoring, and the Performance of Home Mortgages," *Federal Reserve Bulletin*.

¹⁰⁶ As Freddie Mac disclosed, "Credit scores are a useful measure for assessing the credit quality of a borrower. Credit scores are numbers reported by credit repositories, based on statistical models, that summarize an individual's credit record and predict the likelihood that a borrower will repay future obligations as expected. FICO scores, developed by Fair, Isaac and Co., Inc., are the most commonly used credit scores today." Freddie Mac 2006 Annual Report, page 71.

¹⁰⁷ Freddie Mac 2006 Annual Report, Table 38, page 70.

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Company's portfolio comprised mortgages to borrowers with FICO scores less than 660.

65. Freddie Mac also made similarly detailed disclosures in conjunction with its quarterly earnings announcements in 2007. For example, in the presentation slides discussed on Freddie Mac's Q2 2007 August 30, 2007 conference call with analysts (information shown in even more detail in the accompanying Information Supplement¹⁰⁸), Freddie Mac disclosed the following details for the loans underlying its Single Family Guarantee Portfolio:



Single-family credit guarantee portfolio characteristics

| Attribute | Total Portfolio As of June 30, 2007 ¹ | Alt A | Option ARM | FICO<620 | Original LTV >90% | FICO<620 and Original LTV>90% |
|--------------------------------------|--|-----------|------------|-----------|-------------------|-------------------------------|
| 1 Balance (UPB \$ Billions) | \$1,599 | \$120 | \$16 | \$61 | \$102 | \$10 |
| 2 Share of Total Portfolio | 100% | 8% | 1% | 4% | 6% | 1% |
| 3 Average UPB per loan | \$138,291 | \$199,896 | \$223,265 | \$128,138 | \$122,243 | \$111,527 |
| 4 Fixed Rate (% of total portfolio) | 86% | 39% | 0% | 88% | 90% | 92% |
| 5 Owner Occupied | 92% | 82% | 76% | 96% | 96% | 99% |
| 6 Second Liens | 0% | 0% | 0% | 0% | 0% | 0% |
| 7 % of Loans with Credit Enhancement | 16% | 20% | 15% | 33% | 91% | 94% |
| 8 % Seriously Delinquent (D90+) | 0.42% | 1.13% | 0.97% | 2.46% | 1.43% | 4.13% |

66. Freddie Mac also provided further detailed breakdown by vintage, which was important to investors as more recent 2006 and 2007 vintages were performing worse than earlier vintages.

¹⁰⁸ See Table 22.

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Single-family credit guarantee portfolio characteristics

| Attribute | Total Portfolio As of June 30, 2007 ¹ | Alt A | Option ARM | FICO<620 | Original LTV >90% | FICO<620 and Original LTV>90% |
|---------------------------------|--|-------|------------|----------|-------------------|-------------------------------|
| 1 Balance (UPB \$ Billions) | \$1,599 | \$120 | \$16 | \$61 | \$102 | \$10 |
| 2 Share of Total Portfolio | 100% | 8% | 1% | 4% | 6% | 1% |
| 3 Original Loan-to-Value (OLTV) | 71% | 74% | 71% | 76% | 96% | 97% |
| 4 OLTV > 90% | 6% | 4% | 2% | 17% | 100% | 100% |
| 5 Current Loan-to-Value (CLTV) | 60% | 71% | 69% | 66% | 82% | 82% |
| 6 CLTV > 90% | 4% | 6% | 8% | 10% | 41% | 43% |
| 7 CLTV > 100% | 1% | 1% | 1% | 2% | 9% | 9% |
| 8 Average FICO Score | 724 | 715 | 713 | 591 | 691 | 589 |
| 9 FICO < 620 | 4% | 4% | 3% | 100% | 10% | 100% |
| Book Year Concentration | | | | | | |
| 10 2007 | 14% | 37% | 0% | 19% | 17% | 21% |
| 11 2006 | 20% | 37% | 30% | 23% | 20% | 22% |
| 12 2005 | 19% | 18% | 58% | 18% | 17% | 15% |
| 13 2004 | 14% | 4% | 12% | 13% | 14% | 11% |
| 14 <= 2003 | 33% | 3% | 0% | 27% | 31% | 30% |

67. These disclosures reflect what market participants viewed as “non-traditional” mortgage categories that may carry higher credit risk, including “Alt-A,” “Option ARM,” “FICO<620,” and “Original LTV > 90%.” Also, as I noted above, Freddie Mac’s more detailed breakdown in its Information Supplement would allow investors to isolate exposure to even more fine-grained breakdowns, like loans with FICO less than 620 and FICO 620 to 659, thus disclosing to investors total exposure to loans with FICO less than 660. For example, Table 22 in the Q2 2007 Information Supplement presented the following details for borrower and loan characteristics (footnotes omitted) showing that 13% (4% < 620 + 9% 620-659) of the portfolio was for loans with borrower FICO less than 660 as of June 30, 2007:

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Table 22 — Characteristics of Single-Family Mortgage Portfolio⁽¹⁾

| | Purchases During the Three Months Ended June 30, | | Purchases During the Six Months Ended June 30, | | June 30, 2007 | December 31, 2006 |
|--|--|-------------|--|-------------|------------------|----------------------|
| | 2007 | 2006 | 2007 | 2006 | | |
| Original LTV Ratio Range⁽²⁾ | | | | | | |
| Less than 60% | 17% | 20% | 18% | 20% | 23% | 24% |
| Above 60% to 70% | 14 | 15 | 14 | 15 | 16 | 16 |
| Above 70% to 80% | 54 | 53 | 54 | 53 | 48 | 46 |
| Above 80% to 90% | 6 | 7 | 6 | 7 | 7 | 7 |
| Above 90% to 100% | 9 | 5 | 8 | 5 | 6 | 7 |
| Total | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> |
| Weighted average original LTV ratio | 74% | 72% | 73% | 72% | 71% | 70% |
| Estimated Current LTV Ratio Range⁽³⁾ | | | | | | |
| Less than 60% | | | | | 47% | 52% |
| Above 60% to 70% | | | | | 17 | 18 |
| Above 70% to 80% | | | | | 21 | 20 |
| Above 80% to 90% | | | | | 11 | 8 |
| Above 90% to 100% | | | | | 3 | 2 |
| Above 100% | | | | | 1 | — |
| Total | | | | | <u>100%</u> | <u>100%</u> |
| Weighted average estimated current LTV ratio | | | | | 60% | 57% |
| Credit Score⁽⁴⁾ | | | | | | |
| 740 and above | 42% | 43% | 42% | 42% | 45% | 45% |
| 700 to 739 | 23 | 24 | 23 | 24 | 23 | 23 |
| 660 to 699 | 19 | 19 | 19 | 20 | 18 | 18 |
| 620 to 659 | 10 | 10 | 10 | 10 | 9 | 9 |
| Less than 620 | 5 | 4 | 5 | 4 | 4 | 4 |
| Not available | 1 | — | 1 | — | 1 | 1 |
| Total | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> |
| Weighted average credit score | 719 | 722 | 719 | 720 | 724 | 725 |
| Loan Purpose | | | | | | |
| Purchase | 47% | 51% | 46% | 50% | 38% | 37% |
| Cash-out refinance | 33 | 34 | 34 | 35 | 30 | 29 |
| Other refinance | 20 | 15 | 20 | 15 | 32 | 34 |
| Total | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> |
| Property Type | | | | | | |
| 1 unit | 97% | 98% | 97% | 97% | 97% | 97% |
| 2-4 units | 3 | 2 | 3 | 3 | 3 | 3 |
| Total | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> |
| Occupancy Type | | | | | | |
| Primary residence | 89% | 89% | 89% | 89% | 92% | 92% |
| Second/vacation home | 6 | 7 | 6 | 6 | 5 | 5 |
| Investment | 5 | 4 | 5 | 5 | 3 | 3 |
| Total | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> |

68. Table 23 showed the following details for the underlying loan product type distribution (footnotes omitted), showing, for example that 7% were ARMs or Option ARMs and 8% were I/O Interest Only as of June 30, 2007:

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Table 23 — Product Distribution⁽¹⁾

| | June 30, 2007 | December 31, 2006 |
|--|-----------------------|--------------------|
| | (dollars in millions) | |
| <i>Single-family:</i> | | |
| 30-year amortizing fixed-rate ⁽²⁾ | 63% | 63% |
| 15-year amortizing fixed-rate | 17 | 19 |
| Adjustable-rate mortgages, or ARMs | 6 | 7 |
| Option ARMs | 1 | 1 |
| Interest-only | 8 | 5 |
| Balloon/Resets | 1 | 1 |
| Other | 1 | 1 |
| <i>Total single-family</i> | <u>97%</u> | <u>97%</u> |
| <i>Multifamily:</i> | | |
| Conventional ⁽³⁾ | 3% | 3% |
| <i>Total multifamily</i> | <u>3%</u> | <u>3%</u> |
| <i>Total</i> | <u>100%</u> | <u>100%</u> |
| <i>Amounts related to:</i> | | |
| Guaranteed PCs and Structured Securities: | | |
| Single-family | \$1,563,116 | \$1,442,306 |
| Multifamily | 7,745 | 8,415 |
| Structured Securities backed by non-Freddie Mac mortgage-related securities ⁽⁴⁾ | 21,663 | 26,302 |
| Mortgage loans in the Retained portfolio: | | |
| Single-family | 21,434 | 20,640 |
| Multifamily | 47,609 | 45,207 |
| <i>Total</i> | <u>\$1,661,567</u> | <u>\$1,542,870</u> |

69. During the Relevant Period, Freddie Mac also disclosed its exposure to subprime loans.

For example, in its 2006 Annual Report, Freddie Mac disclosed, in pertinent part:

Subprime loans. Participants in the mortgage market often characterize loans based upon their overall credit quality at the time of origination, generally considering them to be prime or subprime. There is no universally accepted definition of subprime. The subprime segment of the mortgage market primarily serves borrowers with poorer credit payment histories and such loans typically have a mix of credit characteristics that indicate a higher likelihood of default and higher loss severities than prime loans. Such characteristics might include a combination of high loan-to-value ratios, low FICO scores or originations using lower underwriting standards such as limited or no documentation of a borrower's income. The subprime market helps certain borrowers by increasing the availability of mortgage credit.

While we do not characterize the single-family loans underlying the PCs and Structured Securities in our credit guarantee portfolio as either prime or subprime, we believe that, based on lender-type, underwriting practice and product structure, the number of loans underlying these securities that are subprime is not significant. Also included in our credit guarantee portfolio are Structured Securities backed by non-agency mortgage-related securities where the underlying collateral was identified as being subprime by the original issuer. At December 31, 2006 and 2005, the Structured Securities backed by subprime mortgages constituted approximately 0.1 percent and 0.2 percent, respectively of our credit guarantee portfolio.

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*With respect to our Retained portfolio, we do not believe that any meaningful amount of the agency securities we hold is backed by subprime mortgages. However, at December 31, 2006 and 2005, we held approximately \$124 billion and \$139 billion, respectively, of non-agency mortgage-related securities backed by subprime loans. These securities include significant credit enhancement based on their structure and more than 99.9 percent of these securities were rated AAA at December 31, 2006.*¹⁰⁹

70. By way of further example, for Q2 2007, Freddie Mac also disclosed that while “[p]articipants in the mortgage market often characterize single-family loans based upon their overall credit quality at the time of origination, generally considering them to be prime or subprime,” and “[t]here is no universally accepted definition of subprime,” “[w]e estimate that approximately \$2 billion, or 0.1 percent, and \$3 billion, or 0.2 percent, of loans underlying” the Single Family Guarantee Portfolio as of June 30, 2007 and December 31, 2006, respectively, were classified as subprime mortgage loans.”¹¹⁰

71. Analysts following Freddie Mac noted its detailed credit risk characteristic disclosures in assessing Freddie Mac’s financial performance. For example, an August 30, 2007 Bear Stearns analyst report commented on the detail provided in the Q2 2007 presentation slides, noting that “[t]he company provided some incremental information showing the exposure to certain controversial asset types: Alt-A (7.5%), Option ARMs (<1% of guaranteed book), FICO<620 (3.8%), over 90% LTV (6.4%), and combined high LTV and low FICO (0.6%).”¹¹¹

72. A November 20, 2007 Bear Stearns report compared the FICO < 620 (“low FICO”) category to “outstanding non-conforming subprime mortgages” and noted Freddie Mac’s exposure to “recent vintage high LTV, low FICO, and Alt A loans”:

Credit quality is deteriorating, reflecting the company’s exposure to recent vintage high LTV, low FICO, and Alt A loans. Still, we estimate that Freddie Mac’s credit risk is significantly below that reflected by non-conforming mortgages and by the market overall. For example, the delinquency rate on Freddie Mac’s low FICO

¹⁰⁹ 2006 Annual Report, page 69. (emphasis added).

¹¹⁰ Freddie Mac Q2 2007 Information Supplement, pages 33-34.

¹¹¹ Bear Stearns, “Solid Q2 Results; Credit Risk Still Low Despite GAAP Distortions,” August 30, 2007, page 1.

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score risk of 2.86% at September 30 is significantly below an average of over 20% for outstanding non-conforming subprime mortgages.¹¹²

73. Argus analysts, noting exposure details provided throughout 2007, commented that Freddie Mac “has significant exposure to the problem areas of the mortgage market - more so than Fannie Mae, in our view,” including 4% of the guaranteed portfolio exposed to FICOs of 620 and below “the traditional cut-off line for being considered a subprime borrower.”¹¹³ The analysts also commented on mortgage characteristic details that were provided by Freddie Mac in quarterly disclosures prior to November 20, 2007:

Freddie Mac's total portfolio of mortgages and MBS was \$1.66 trillion at September 30. Freddie also broke out various statistics regarding the composition of its portfolio. There is some overlap in these categories, but about \$66 billion, or 4% of the portfolio, have FICOs of 620 and below, the traditional cut-off line for being considered a subprime borrower. But Freddie also had \$131 billion, or 8% of its portfolio, in Alt-A loans, or so-called 'liar loans' for which borrowers typically do not have to prove assets or income. About \$149 billion of loans are interest-only ARMs, of which about \$15 billion are option ARMs. Freddie thus has significant exposure to the problem areas of the mortgage market - more so than Fannie Mae, in our view.

74. Bank of America analysts also performed a detailed modeling analysis of the guarantee portfolios of Fannie Mae and Freddie Mac and used FICO < 620 as a proxy for “subprime.”¹¹⁴

75. For the retained portfolio, Freddie Mac also provided detailed breakdown by exposure type, highlighting non-agency RMBS. For example, Freddie Mac’s Q2 2007 Information Supplement disclosed \$119 billion of non-agency RMBS backed by “subprime” and about \$55 billion backed by “Alt-A” held in the retained portfolio.¹¹⁵

76. These disclosures were also recognized by analysts following Freddie Mac. For example, as noted above, Credit Suisse analysts commented on November 19, 2007 that “Freddie’s

¹¹² Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007, page 2.

¹¹³ Argus, “Freddie Mac,” December 6, 2007, page 3.

¹¹⁴ Bank of America, “Freddie Mac,” November 29, 2007.

¹¹⁵ See Freddie Mac Q2 2007 Information Supplement, page 34.

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capital position may also be pressured by potential other than temporary impairments on its \$120 billion subprime AAA portfolio in the coming quarters” and if recent “spread widening” did not reverse, “we believe that Freddie could recognize an other than temporary impairment of between \$1-5 billion (for a 1-10% price move in the securities), resulting in additional portfolio sales and/or raising preferred stock.”¹¹⁶

77. In addition to disclosing its key credit risk characteristics, the Company also disclosed how its mortgage portfolio had performed on a monthly basis by reporting the delinquency rates of different components of its single-family and multifamily mortgage portfolio.¹¹⁷

78. Prior to and during the Relevant Period, Freddie Mac disclosed its “credit risk sensitivity” on a quarterly basis, which represented the present value (“PV”) of its “expected credit losses [in its single-family mortgage portfolio] from an immediate five percent decline in single-family home prices for the entire U.S.” both with and without “receipt of private mortgage insurance claims and other credit enhancements.”¹¹⁸ As the Company’s credit risk sensitivity disclosure indicated, Freddie Mac’s expected credit losses related to its single-family mortgage portfolio were likely to *increase* both in absolute terms (Net Present Value or “NPV”), and as a percentage of the size of the portfolio which varied over time (“NPV ratio” terms) and, over the Relevant Period, as conditions in the U.S. housing markets deteriorated.

79. The Company also disclosed its provision for credit losses on a quarterly basis, which increased over the Relevant Period.¹¹⁹ *See* Figure 2.

¹¹⁶ Credit Suisse, “Profitability Outlook Unfavorable; Are Security Impairments Down the Road?,” November 19, 2007.

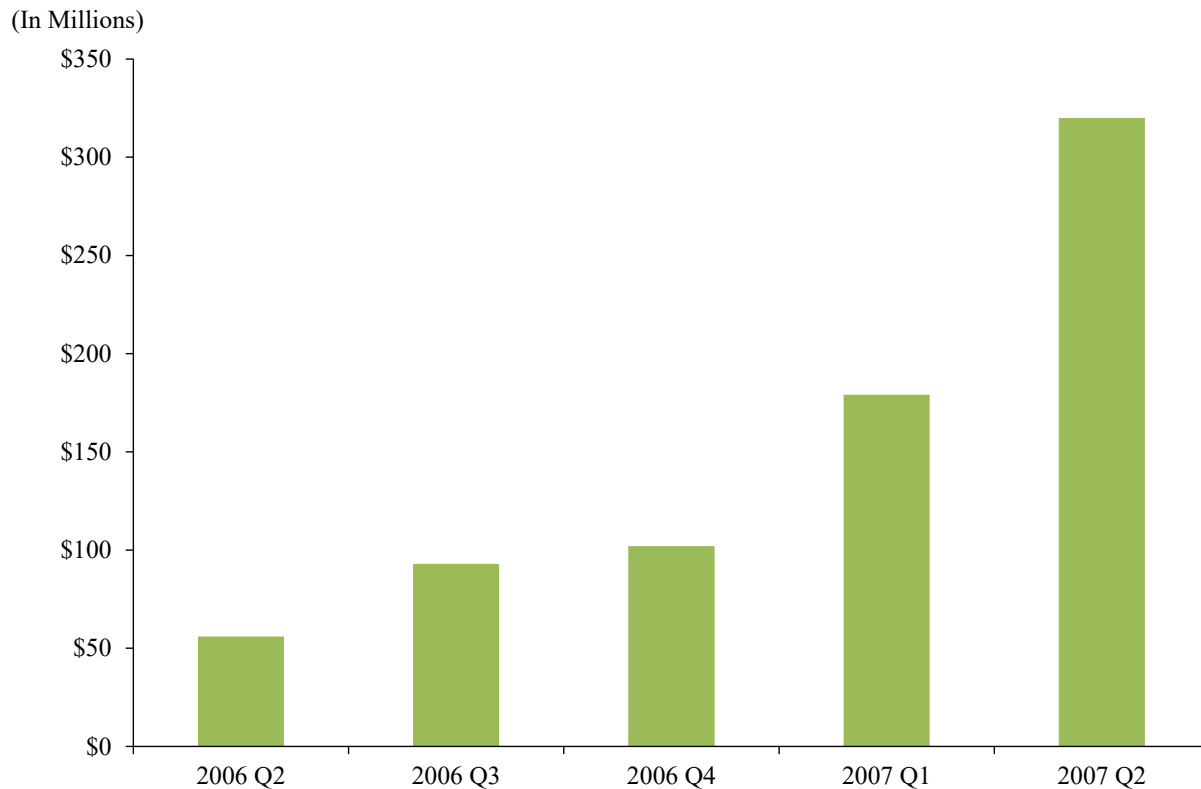
¹¹⁷ Freddie Mac disclosed that its “[s]ingle-family delinquencies are based on the number of mortgages 90 days or more delinquent or in foreclosure while multifamily delinquencies are based on net carrying value of mortgages 60 days or more delinquent or in foreclosure.” Freddie Mac Monthly Volume Summary: August 2006, page 3, n. 12.

¹¹⁸ Freddie Mac Supplement to June 28, 2006 Information Statement, dated January 5, 2007, page 7.

¹¹⁹ *See* Figure 3.

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Figure 2 - Every Quarter over the Relevant Period, Freddie Mac Recorded Increasingly Larger Provisions for Credit Losses



Notes and Sources: Freddie Mac Q1, Q2, and Q3 2007 Information Supplements and 2006 Consolidated Statement of Income.

80. Credit risk characteristics assist investors to forecast the Company's expected future credit losses. Freddie Mac not only disclosed its relevant credit risk characteristics but also its expected future credit losses. Analysts recognized the effect of deteriorating market conditions and that further losses were likely but uncertain. For example, a J.P. Morgan analyst noted that Freddie Mac's Q1 2007 credit losses "were due to deteriorating credit conditions and we expect the continued weak housing market to drive more losses in upcoming quarters, although we cannot be certain how sizeable those losses may be."¹²⁰

¹²⁰ J.P. Morgan, "Freddie Mac, Mark-to-Market Items Muddy Otherwise In-line Quarter," June 14, 2007, page 2.

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3. Other disclosed risks: Prepayment Risk, Interest Rate Spread Risk, and Interest Rate Volatility Risk

81. In addition to mortgage credit risks, Freddie Mac also disclosed other risks related to changes in interest rates, including OAS spread risk and prepayment risk that could impact its financial statements, including net interest income and fair value of assets.

82. In the Single Family Guarantee Portfolio, changes in interest rates could cause declines in the fair value of the portfolio, resulting in income losses.¹²¹ Similarly, for the retained portfolio, Freddie Mac also noted exposure to changes in mortgage-to-debt OAS which could significantly affect Fair Value of Net Assets but that it did “not attempt to hedge or actively manage the basis risk represented by the impact of changes in mortgage-to-debt OAS because we generally hold a substantial portion of our mortgage assets for the long term and we do not believe that periodic increases or decreases in the fair value of net assets arising from fluctuations in OAS will significantly affect the long-term value of the Retained portfolio.”¹²²

83. Freddie Mac also noted interest rate volatility risk, explaining that “the risk that changes in the market’s expectation of the magnitude of future variations in interest rates will adversely affect shareholder value,” and that “[i]mplied volatility is a key determinant of the value of an interest-rate option. Since mortgage assets generally include the borrower’s option to prepay a loan without penalty, changes in implied volatility affect the value of mortgage assets.”¹²³

84. Freddie Mac further disclosed how unanticipated changes in interest rates created prepayment risk, noting:

¹²¹ Freddie Mac 2006 Annual Report, page 60 (“Our credit guarantee activities also expose us to interest-rate risk because changes in interest rates can cause fluctuations in the fair value of our existing credit guarantee portfolio”).

¹²² Freddie Mac 2006 Annual Report, page 48.

¹²³ Freddie Mac 2006 Annual Report, page 60. Freddie Mac also highlighted yield curve risk (“the risk that non-parallel shifts in the yield curve (such as a flattening or steepening) will adversely affect shareholder value. [Changes] in the shape, or slope, of the yield curve often arise due to changes in the market’s expectation of future interest rates at different points along the yield curve...”).

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*Changes in interest rates may also affect prepayment assumptions thus potentially impacting the fair value of our assets, including investments in our Retained portfolio, our derivative portfolio and our Guarantee asset. When interest rates fall, borrowers are more likely to prepay their mortgage loans by refinancing them at a lower rate. An increased likelihood of prepayment on the mortgages underlying our mortgage-related securities may adversely impact the performance of these securities. An increased likelihood of prepayment on the mortgage loans we hold may also negatively impact the performance of our Retained portfolio.*¹²⁴

85. Freddie Mac's quarterly disclosures detailed how these risks affected financial results, as acknowledged and discussed by market analysts. On August 30 2007, Freddie Mac reported its Q2 2007 financial results, noting that "[t]urmoil in the mortgage market ... has led to an increase in mortgage and credit risk pricing which had a direct, negative impact on the valuation of our guarantee-related obligations" and that "[w]e expect further deterioration in the value of our guarantee-related obligations in the third quarter of 2007 as market conditions continue to worsen."¹²⁵ Freddie Mac reported a "provision for credit losses" of \$320 million, noting that it "reflect[ed] weakening in the housing market."¹²⁶ Freddie Mac also reported mark-to-market losses of \$205 million from "losses on loans purchased" and \$187 million from "losses on certain credit guarantees."¹²⁷

86. Analysts noted that "[credit] market deterioration in August will likely result in greater mark to market adjustments in [the third quarter of 2007]."¹²⁸ And analysts noted the "five-fold" increase in the provision for credit losses to \$320 million ("reflecting a deterioration on loans originated in 2006/07") and that mark-to-market losses on "credit guarantees and purchased loans also rose five times to \$392m."¹²⁹ They also commented that:

¹²⁴ Freddie Mac 2006 Annual Report, page 16.

¹²⁵ Q2 2007 Information Supplement, page 3.

¹²⁶ Freddie Mac "Freddie Mac Releases Second Quarter 2007 Financial Results," dated August 30, 2007 ("Freddie Q2 2007 Earnings Release"), pages 1-2.

¹²⁷ Freddie Mac Q2 2007 Earnings Release, page 2.

¹²⁸ Bear Stearns, "Solid Q2 Results; Credit Risk Still Low Despite GAAP Distortions," August 30, 2007.

¹²⁹ nabCapital, "At a glance – Freddie Mac: A Poor 2Q07 Result and an indication that the US mortgage market will remain tough for some time yet," August 31, 2007.

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With less than 4% of Freddie's \$1.6bn total mortgage portfolio having a FICO score below 620 and 8% being categorized as Alt A, the severity of the increase in Freddie's credit charges indicates the stress currently being seen in the mortgage markets is not solely limited to those categorized as subprime.¹³⁰

87. Prior to the November 20, 2007 release of Freddie Mac's Q3 2007 results, on October 26, 2007 Morgan Stanley analysts noted, in a report titled "In the long term, pricing trumps losses, but the short-term could still be volatile," and that they expected Freddie Mac to report in its upcoming earnings report in November "deteriorating credit and mark-to-market losses."¹³¹ They also commented that in "coming quarters, investors may see mark-to-market losses on AAA-rated nonprime mortgage securities, where spreads have widened massively in recent months" and that "[f]inancial results will also likely include mark-to-market losses on guaranty contracts and guaranty assets, which may reflect increased loss expectations, pressure to guarantee unprofitable loans in order to make housing goals imposed by the Department of Housing and Urban Development, or random timing issues."¹³² Morgan Stanley analysts also forecasted ultimate credit losses, but noted that those forecast represented their "best guesswork, taken in the face of considerable uncertainty, in what may be the worst housing downturn since the Great Depression."¹³³

88. Similarly, Fox-Pitt Kelton analysts – including Shapiro, who has been retained by Plaintiff in this case – predicted a \$1.6 billion loss for Q3 2007. Specifically, they noted in an October 24, 2007 report titled "Expect Large GAAP Loss In Quarter" that "[b]ased on data released today by FRE,¹³⁴ we now estimate that the company will report a large GAAP loss of around (\$1.6 b), or around (\$2.45) per share, in the 3rd quarter due to mark-to-mark changes in

¹³⁰ nabCapital, "At a glance – Freddie Mac: A Poor 2Q07 Result and an indication that the US mortgage market will remain tough for some time yet," August 31, 2007.

¹³¹ Morgan Stanley, "Mortgage Finance: In the long term, pricing trumps losses, but the short-term could still be volatile," October 26, 2007, page 1.

¹³² Morgan Stanley, "Mortgage Finance: In the long term, pricing trumps losses, but the short-term could still be volatile," October 26, 2007, page 5.

¹³³ Morgan Stanley, "Mortgage Finance: In the long term, pricing trumps losses, but the short-term could still be volatile," October 26, 2007.

¹³⁴ Freddie Mac had released its monthly Volume Summary report.

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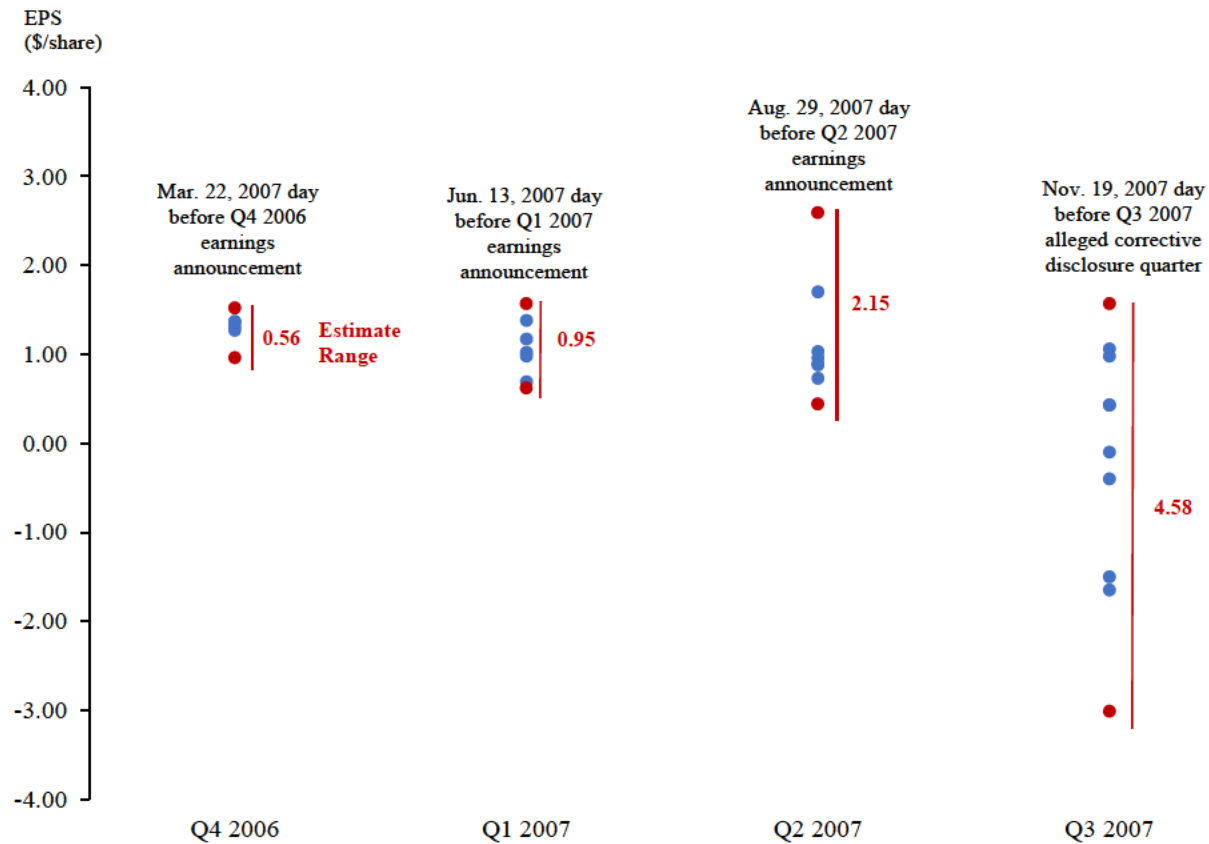
excess of \$3 b on its interest rate derivative hedges and on its credit exposure”¹³⁵

89. The “considerable uncertainty” in analysts’ estimates and “extreme volatility” in market conditions is reflected in the growing dispersion of analysts’ estimates leading up to the November 20, 2007 Q3 earnings announcement. Figure 3 shows the range of analysts’ EPS forecasts for Freddie Mac the day prior to each quarter’s earnings announcements from Q4 2006 to Q3 2007, illustrating this growing range in the second half of 2007 as the credit crisis and real estate downturn intensified.¹³⁶

¹³⁵ Fox-Pitt Kelton, “Expect Large GAAP Loss In Quarter,” October 24, 2007.

¹³⁶ In the EPS analyst forecast data obtained from Eikon Refinitiv plotted in the Figure, three analyst firms appear to use a customized measure of earnings, while the others use GAAP earnings. Removing the estimates from those three analysts does not change the conclusions drawn from the Figure.

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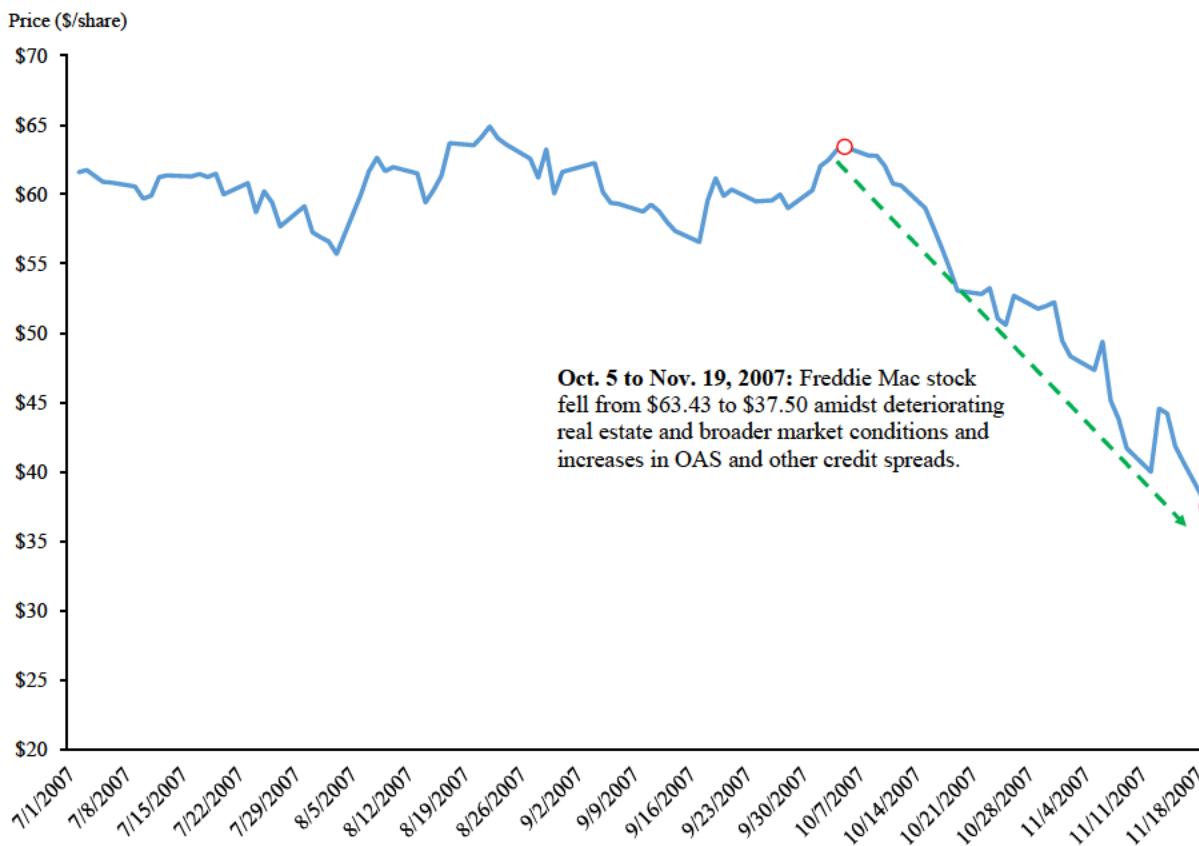
Figure 3: Dispersion of Freddie Mac Analyst EPS Estimates as of One Trading Date Prior to Each Earnings Announcement (Q4 2006 to Q3 2007)

Notes and Sources: Refinitiv Eikon; Fox-Pitt, Kelton, "Buybacks Bolster Lackluster Results," March 23, 2007.

4. Freddie Mac stock declined over 35% from October 1 to November 19, 2007 as the market assimilated materialization of disclosed risks.

90. Leading up to the November 20, 2007 alleged corrective disclosure when Freddie Mac reported Q3 2007 financial results, Freddie Mac's stock price had declined over 35% (from around \$63 to \$37.50) from the start of October through November 19, 2007. See Figure 4 below.

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Figure 4: Freddie Mac's stock price declined by over 35% from October 5 to November 19, 2007

Notes and Sources: Market data obtained from CRSP; Market information discuss in main body of report.

91. This decline tracked the growing economic uncertainty in October and November as real estate and broader market conditions deteriorated and the financial crisis worsened. See Exhibits 3-5. An article in the Wall Street Journal on November 19, 2007 titled “Feel Default Heat -- Falling Home-Value Growth Affects Even Mortgage Titans’ Stable Borrowers” commented on the effect of deteriorating mortgage market conditions on the GSEs’ stock prices, noting that Freddie Mac’s price was down 40% year to date, and quoted Joshua Rosner, an analyst at Graham Fisher & Co. in New York City who said that “[w]e are seeing unprecedented foreclosures and declines in home prices not seen since the Great Depression.”¹³⁷

¹³⁷ *The Wall Street Journal*, “Fannie, Freddie Feel Default Heat --- Falling Home-Value Growth Affects Even Mortgage Titans’ Stable Borrowers,” November 19, 2007.

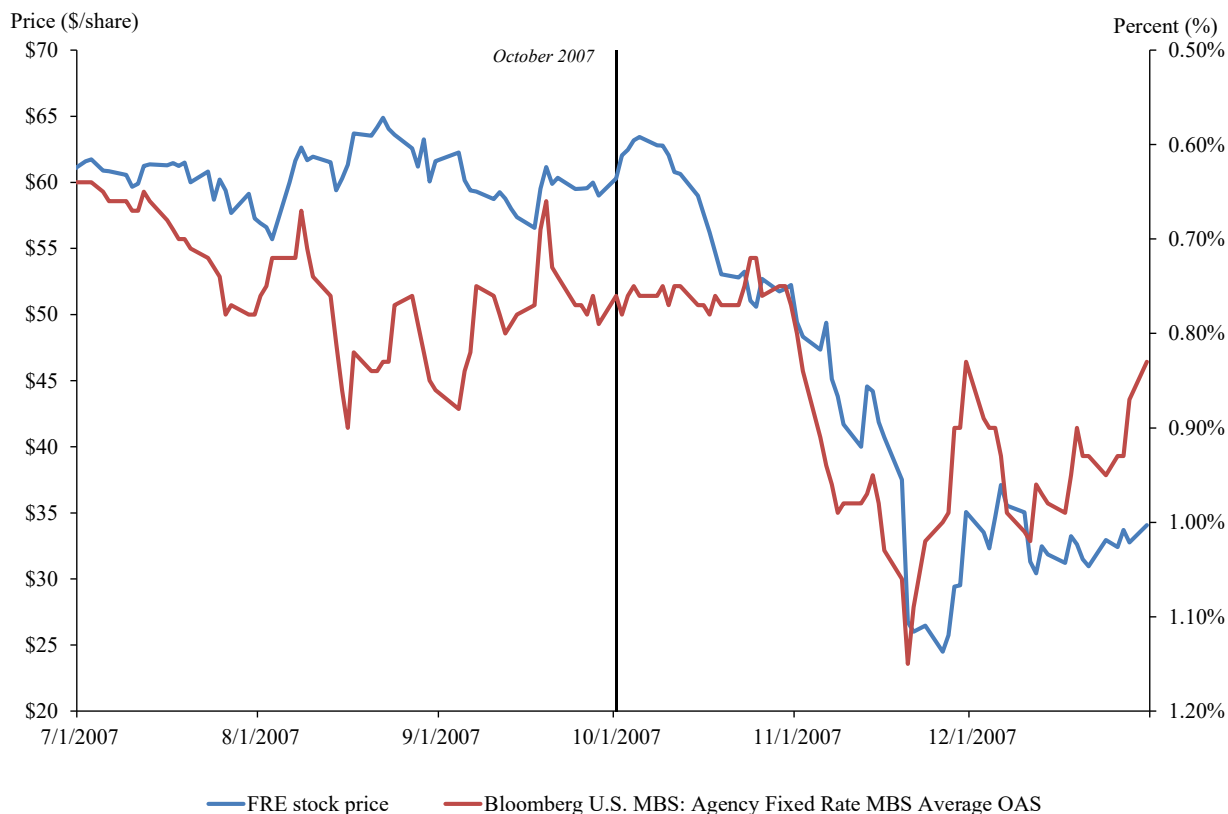
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92. Figure 5 below shows Freddie Mac's stock price compared to the OAS spread, illustrating the sharp increase in the spreads in November and showing the correlation with Freddie Mac's stock decline, consistent with the sensitivity of Freddie Mac's financial results to the spreads, just as the Company had disclosed. On November 19, 2007, after market close *Reuters* reported that "[y]ield spreads on some U.S. mortgage-backed securities and agency debt reached multiyear wides on Monday as credit market concerns caused investors to flee spread products in favor of safer government bonds a day before Freddie Mac releases its third-quarter earnings report."¹³⁸

¹³⁸ *Reuters News*, "MORTGAGES/AGENCIES-Spreads hit new wides; Freddie in focus," November 19, 2007, 4:24 PM. ("The yield premium on Fannie Mae MBS paying 6 percent interest versus the 5-year Treasury note widened to 2.167 percentage points on Monday versus 2.08 percentage points on Friday, according to Reuters data. Yield spreads on MBS are at their widest levels against Treasuries since at least 2004. Yield premiums on some U.S. agency debentures have gapped out to or near their widest in a decade, reflecting interest rate swaps and sharply lower Treasury yields in markets steeped in credit fears.")

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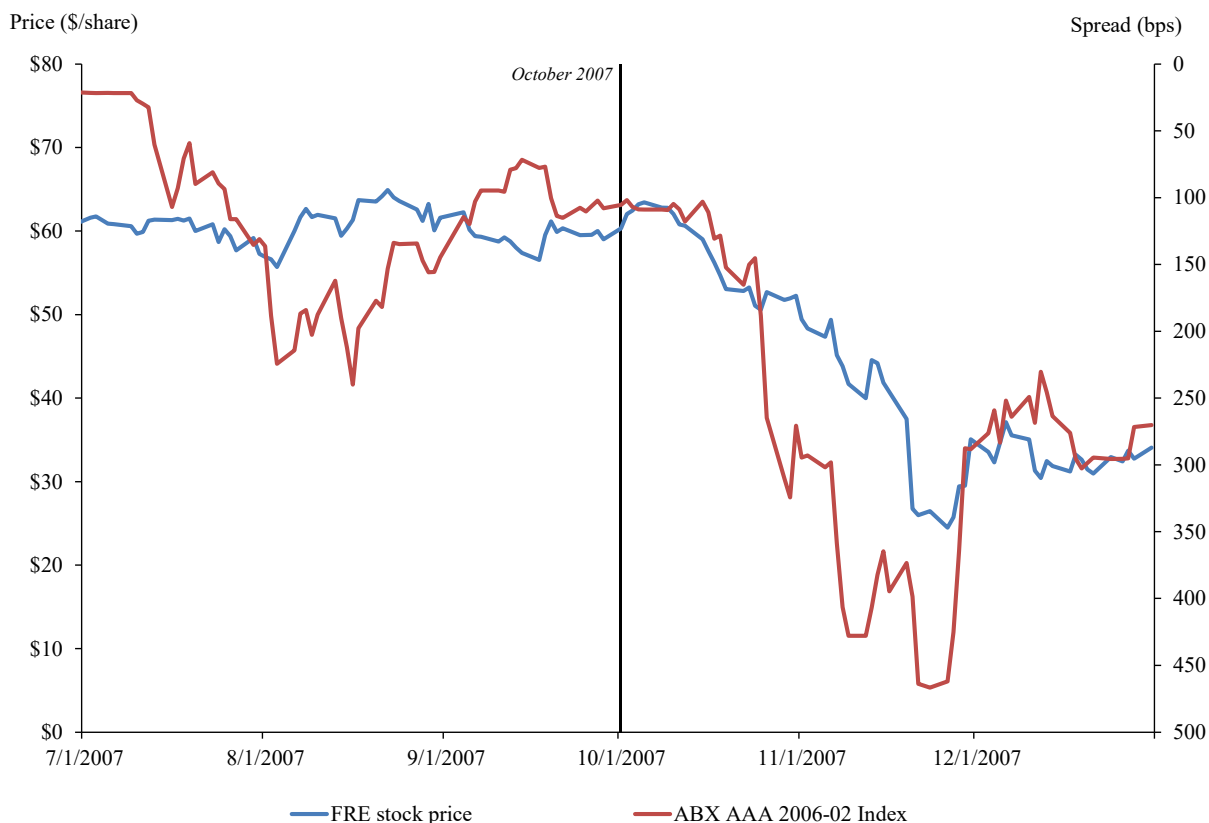
Figure 5: Freddie Mac Stock Price (left axis) and OAS Agency MBS Spreads (right axis, inverted), July 1, 2007 to December 31, 2007



Notes and Sources: CRSP, Bloomberg (Bloomberg U.S. MBS: Agency Fixed Rate MBS Average OAS, LD10OAS Index).

93. Figure 6 also plots Freddie Mac's stock price along with the AAA ABX index spread (an index tracked by analysts to estimate the market value of Freddie Mac's subprime RMBS exposure, as noted above) and illustrates that Freddie Mac's exposure to subprime credit risks it had already disclosed contributed to its stock price decline between October 5 and November 19, 2007.

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Figure 6: Freddie Mac Stock Price (left axis) and AAA ABX 2006-2 Spread (right axis, inverted), July 1 to December 31, 2007

Notes and Sources: CRSP, Markit.

94. The stock price decline tracking this market deterioration is consistent with the investors understanding Freddie Mac's detailed mortgage credit and interest rate risks disclosures detailed above in Section IV.C. Indeed, as noted above, some analysts expected Freddie Mac to report billions in mark-to-market credit and other losses for Q3 2007 and expected losses for subsequent quarters. A November 19, 2007 Bloomberg News article reported that:

With the U.S housing market slumping to its worst point in 16 years, investors are trying to determine just how many bad loans Freddie Mac and Fannie Mae own or have guaranteed. Freddie Mac, which plans to release third-quarter earnings

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*tomorrow, may report \$1 billion to \$5 billion in losses from credit defaults, Credit Suisse Group analysts wrote in a research note today.*¹³⁹

95. The Credit Suisse analyst referred to in the Bloomberg article also commented that day that “Freddie’s capital position may also be pressured by potential other than temporary impairments on its \$120 billion subprime AAA portfolio in the coming quarters,” noting the “significant widening of ABX AAA spreads in October” compared to the second quarter.¹⁴⁰ On November 19, JP Morgan analysts similarly noted that day that “[w]e expect FRE to report a sizeable loss for 3Q07 driven by large mark-to-market losses and higher credit expenses partly offset by gains from the sale of securities in the quarter. Freddie is likely to report large negative marks on loans repurchased from PCs.”¹⁴¹

V. The alleged misrepresentations and omissions did not have a statistically significant stock price impact, lack economic significance, and did not cause losses to OPERS.

A. Summary

96. On November 20, 2007, Freddie Mac reported its Q3 2007 financial results which included a quarterly earnings loss of \$2.03 billion and an expectation that credit losses would “continue to increase for the remainder of 2007 and in 2008, especially if conditions, such as home prices and the rate of home sales, continue to deteriorate.”¹⁴² Freddie Mac’s stock price per share closed at \$26.74, a 29% decline from previous day closing price of \$37.50. This 29% decline in stock price corresponds to a \$7.1 billion decline in market capitalization of equity.¹⁴³

97. Plaintiffs claim “[s]ubstantially all the announced losses came from Freddie Mac’s

¹³⁹ *Bloomberg News*, “Freddie, Fannie Fall on Concern About Losses in Mortgage Market,” November 19, 2007 14:37. (underline added)

¹⁴⁰ Credit Suisse, “Profitability Outlook Unfavorable; Are Security Impairments Down the Road?” November 19, 2007.

¹⁴¹ JP Morgan, “Higher Credit Expenses and GA Loss Likely in 3Q, but Derivative Losses Likely Smaller than Fannie’s,” November 19, 2007.

¹⁴² Freddie Mac Q3 2007 Press Release, page 3.

¹⁴³ Data obtained from Center for Research in Security Prices (“CRSP”).

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investments in subprime, Alt-A and other nontraditional mortgages” and that this decline represents a correction of earlier material disclosure defects and realization of concealed subprime and nontraditional mortgage risks demonstrating that the alleged fraud “proximately caused foreseeable losses” to OPERS.¹⁴⁴ As I explain below, this claim is incorrect.

98. The claim that “[s]ubstantially all the announced losses came from Freddie Mac’s investments in subprime, Alt-A and other nontraditional mortgages” is also factually incorrect as plain reading of Freddie Mac’s disclosures on that day shows. For example, \$1.5 billion of the approximately \$5 billion in losses (that led to the overall net \$2 billion quarterly loss announced on that day) related to mark-to-market losses on interest rate derivative positions, which are clearly unrelated to the allegations.

99. The claim also ignores that almost all of the remaining \$3.5 billion in mortgage-related losses (\$5 - \$1.5 billion) could reasonably be explained by disclosed risks. To understand why this distinction between disclosed and concealed risks is important, it is useful to consider the following. According to basic financial theory, in a well-functioning and efficient stock market, stock market prices reflect forward-looking expectations. If the market is not efficient, then analyzing stock prices to infer materiality and loss causation would be futile. But, if the market is efficient, assuming (as Plaintiffs allege) that Freddie Mac’s negative stock price reaction on November 20, 2007 was caused by its Q3 2007 announcement (including the \$2.03 billion Q3 loss), the reaction must be due to the unanticipated portion of the losses because the anticipated portion would already be priced into the stock. The unanticipated losses, again as a matter of logic, could be due either only to the materialization of previously disclosed risks, only to the materialization of allegedly concealed risks, or a combination of both. I understand from counsel that to prove their claim of damages caused by the alleged misrepresentations and omissions that concealed certain risks, it is Plaintiff’s burden to prove that misrepresentations or omissions caused

¹⁴⁴ TAC, ¶¶4, 271.

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the price decline about which Plaintiff complains. Simply identifying a price drop and assuming this represented the materialization of alleged concealed risks, while ignoring the possible impact of disclosed risks, is insufficient.

100. For example, Plaintiff has made no effort to quantify the extent to which disclosed risks contributed to the \$3.5 billion mortgage-related losses noted above. The economic evidence suggests that these disclosed risks relating to loans that are not at issue in this case were a driver of these losses. This is consistent with a 2010 Chicago Federal Reserve study that found that while the news media had “carried countless stories about soaring defaults among subprime mortgage borrowers,” default rates on prime loans which account for 75% of the total outstanding mortgages in the U.S., had increased “more rapidly” than subprime loans, with the percentage of loans in default within the first 12 months of origination for 2007 vintage loans more than doubling compared to 2005 vintage loans.¹⁴⁵

101. In addition, even the portion of the loss relating to “investments in subprime, Alt-A and other nontraditional mortgages” cannot entirely be due to the alleged fraud because, as I have discussed above, Freddie Mac had already disclosed as of the end of Q2 2007, for its Single-Family Guarantee Portfolio, and \$4 billion of exposure to mortgages with FICO < 620 which analysts compared to the broader private-label “subprime” market and \$120 billion of Alt-A exposure. Freddie Mac also disclosed its increased purchases of Interest Only and option ARM loans, which it disclosed it expected to default at higher rates than traditional loans. The portion of the \$3.5 billion in mortgage-related losses could therefore easily be explained by these and other disclosed risks. Freddie Mac had also disclosed its \$119 billion “subprime” and \$55 billion “Alt-A” non-agency RMBS held in the retained portfolio where impairments could be recognized in the future if market conditions did not improve, which analysts estimated could further deplete capital levels by \$1-\$5 billion.

¹⁴⁵ Gene Amromin and Anna L. Paulson, “Default Rates on Prime and Subprime Mortgages: Differences & Similarities,” *Federal Reserve Bank of Chicago*, 2010, page 1.

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102. More importantly, viewing the November 20, 2007 price decline in isolation is an incomplete and biased view of the market reaction to the information the Company reported that day. As discussed below, a major market concern on that day related to whether or not Freddie Mac would have sufficient regulatory capital after recognizing the losses announced on November 20, 2007 as well as potential future losses that might occur. Thus, the price decline cannot be analyzed while ignoring Freddie Mac's price recovery when Freddie Mac completed a \$6 billion preferred share capital raise a mere seven trading days later, on November 30, 2007. Freddie Mac's market capitalization declined by \$7.118 billion on November 20, 2007 but increased by \$6.933 billion a week later, on the three days when the market learned information about the capital raise (November 27, 28, and 30, 2007, "capital raise days"). The difference of \$185 million represents less than 1% of Freddie Mac's equity capitalization prior to the November 20th announcement and is economically immaterial. As analysts noted, the information about capital raise was important to stock investors because it alleviated concern in the market about Freddie Mac's ability to take advantage of profitable growth opportunities, given regulatory capital constraints exacerbated by "non-cash"¹⁴⁶ mark-to-market losses announced on November 20, 2007 that were driven by "[d]epressed market prices for illiquid assets" amidst the severe real estate market downturn and broader financial crisis.¹⁴⁷

103. My statistical analysis of "excess" stock price changes (i.e., controlling for market-wide and industry-wide factors) on November 20 and the "capital raise days" further confirms the economic insignificance of the alleged corrective information and lack of loss causation because it demonstrates that the full market reaction was not distinguishable from zero. Thus, the economic evidence shows that Plaintiff's alleged misrepresentations and omissions were economically insignificant and did not cause losses to OPERS.

¹⁴⁶ Morgan Stanley, "Freddie Mac Reports 3Q07 Loss," November 20, 2007.

¹⁴⁷ Bear Stearns, "GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well," November 20, 2007.

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B. Freddie Mac's November 20, 2007 Q3 2007 financial results announcement

104. On November 20, 2007 before trading hours, Freddie Mac reported a Q3 2007 loss of \$2.03 billion, or \$3.29 per share which “reflect[ed] a higher provision for credit losses and losses on mark-to-market items.”¹⁴⁸ Freddie Mac’s CEO and CFO noted on the earnings conference call with analysts later that day that “the third quarter continued to represent a very difficult environment as falling housing prices, deteriorating mortgage credit, continued volatility in the fixed income market all contributed to a net loss of \$2 billion,” and that “[g]iven the continuation of the same market trends that produced these results through October and November, it’s likely that the fourth quarter will prove difficult as well” with performance “about in line with the third quarter.”¹⁴⁹

105. Freddie Mac specified that the \$2 billion Q3 2007 loss was driven by a \$1.2 billion “provision for credit losses,” and \$3.8 billion of “mark-to-market losses” from (a) \$1.5 billion on “interest-rate related items” and (b) \$2.3 billion on “credit-related items.”¹⁵⁰ Freddie Mac noted that the mark-to-market losses on the “interest rate related items” “were related to the impact of declining long-term interest rates on the value of the company’s derivatives portfolio” and that \$1.4 of the \$2.3 billion mark-to-market losses on the “credit-related items” “were related to the impact of widening credit spreads on the value of the company’s credit guarantee activities.”¹⁵¹ The \$1.5 billion mark-to-market loss on “interest-rate related items” was entirely unrelated to Freddie Mac’s single-family mortgage portfolio.

106. To better understand the remaining mortgage-related losses, i.e., the \$1.2 billion “provision for credit losses,” (“Item 1”) and \$2.3 billion “mark-to-market” loss from “credit-related items,” (“Item 2”) it is useful to briefly review Freddie Mac’s business activities and Single-

¹⁴⁸ Freddie Mac Q3 2007 Press Release, page 1.

¹⁴⁹ “FRE - Q3 2007 Freddie Mac Earnings Conference Call,” Final Transcript, November 20, 2007, 10:00 AM ET (“Freddie Mac Q3 2007 Earnings Call”), page 3.

¹⁵⁰ See Freddie Mac Q3 2007 Press Release and Q3 2007 Slides, slide 2.

¹⁵¹ Freddie Mac Q3 2007 Press Release, page 2.

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Family Guarantee Portfolio.

107. As I mentioned above, Freddie Mac carried out its mission and generated income through two main business activities: “credit guarantee activities” and “investment activities.”¹⁵² The credit guarantee activities involved buying lender-originated residential mortgage loans, packaging them into MBS (also called participation certificates or “PCs”), guaranteeing timely payment of interest and principal on these securities, and then selling them to investors to receive a fee for the guarantee.¹⁵³ Freddie Mac’s investment activities (also referred to as retained portfolio investment activities) involved purchasing MBS/PCs (and sometimes unsecuritized mortgage loans) for investment, earning a spread on those investments (over its own funding cost), and managing the interest rate risk. Freddie Mac managed its interest risk by “closely matching the interest obligations on ... debt with the expected cash inflows from [the] mortgage-related investments” and by using a variety of derivatives.¹⁵⁴ The retained securities were recorded as assets on Freddie Mac’s balance sheet.¹⁵⁵

108. These business activities and Freddie Mac’s total single-family mortgage exposure are summarized in Table 1. The Table summarizes Freddie Mac’s (1) Single-Family Guarantee Portfolio as of the end of Q3 2007 (part of which was held in the retained portfolio), and (2) single-family non-agency “subprime” and “Alt-A” RMBS held in the retained portfolio. The table shows that Freddie Mac’s total single-family mortgage portfolio was about \$1.66 trillion as of Q3 2007 (corresponding to the detailed loan characteristics described above in Section IV.C) and the retained portfolio contained \$105 billion and \$53 billion of single-family “subprime” and “Alt-A” non-agency MBS, respectively.

¹⁵² Freddie Mac 2006 Annual Report, page 3.

¹⁵³ Freddie Mac 2006 Annual Report, page 4.

¹⁵⁴ Freddie Mac 2006 Annual Report, page 4.

¹⁵⁵ Freddie Mac 2006 Annual Report, pages 40-41.

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Table 1: Freddie Mac Total Single-Family Mortgage Portfolio Based on Unpaid Principal Balances and Single-Family Non-Agency “Subprime” and “Alt-A” RMBS in Retained Portfolio (as of Q3 2007)

| | <i>as of Sep. 30, 2007</i> |
|--|----------------------------|
| | (\$ b) |
| | [a] |
| <u>Outstanding Guaranteed PCs and Structured Securities:</u> | |
| [1] Single-family | \$1,291 |
| <u>Retained Portfolio (Securities):</u> | |
| [2] Guaranteed PCs and Structured Securities (Single-family) | \$344 |
| <u>Retained Portfolio (Mortgage Loans):</u> | |
| [3] Single-family | \$23 |
| [4] Total Single-Family Mortgage Portfolio ([1] + [2] + [3]) | \$1,658 |
| <u>Retained Portfolio (Non Freddie Mac Mortgage-Related Securities):</u> | |
| [5] Single-family non-agency backed by "subprime" | \$105 |
| [6] Single-family non-agency backed by "Alt-A" | \$53 |

Notes and Sources:

[a]

[1] Q3 2007 Information Supplement, Table 31, pg. 47.

[2] = \$1,634.5 billion - \$1,290.748 billion. Q3 2007 Information Supplement, Table 31, pg. 47.

[3] Q3 2007 Information Supplement, Table 23, pg. 32.

[4] = [1] + [2] + [3].

[5] Q3 2007 Information Supplement, pg. 33.

[6] Q3 2007 Information Supplement, pg. 33.

109. Returning to the \$1.2 billion provision for credit loss (Item 1), this loss related to the \$1.6 trillion Single-Family Guarantee Portfolio and reflected “observed credit deterioration, particularly on 2006 and 2007 mortgage loan originations that have exhibited higher transition rates from delinquency to foreclosure, and higher expected severities of losses on a per-property basis resulting from slower home price appreciation and higher UPBs on those loans generating losses.”¹⁵⁶ As I discussed above in Section IV.C, Freddie Mac had disclosed detailed characteristics of its Single-Family Guarantee Portfolio (including a FICO segment breakdown, LTV range breakdown, portion of interest only (or “I/O), Option ARM, and vintage), and in particular that 2006 and 2007 vintage loans accounted for 20% and 14% of the total Single-Family

¹⁵⁶ Freddie Mac Q3 2007 Press Release, page 3.

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Guarantee Portfolio as of June 20, 2007 and which were noted to be of higher credit risk.

110. The second loss item (Item 2) related to Freddie Mac's mortgage exposure is the \$2.3 billion mark-to-market losses on "credit-related items," of which \$1.4 billion "were related to the impact of widening credit spreads on the value of the company's credit guarantee activities."¹⁵⁷ Freddie Mac's exposure to credit spreads was widely disclosed and discussed by analysts, as I noted above in Section IV.

111. Although it did not affect GAAP earnings underlying the \$2 billion quarterly net income loss, as part of its financial reporting, Freddie Mac also disclosed a quarterly decrease in the "fair value of net assets attributable to common stockholders, before capital transactions" of approximately \$8.1 billion "compared to an increase of approximately \$300 million in the third quarter of 2006."¹⁵⁸ \$5.9 billion of this reduction related to "investment activities in the company's retained portfolio" which included a "reduction in fair value of approximately \$8.0 billion attributable to net mortgage-to-debt OAS widening in the third quarter of 2007," where \$3.5 billion was "related to the impact of the net mortgage-to-debt OAS widening on the company's portfolio of non-agency mortgage-related securities."¹⁵⁹

112. Investors understood that while the non-agency securities held in the retained portfolio are accounted for as "available for sale" (AFS) and therefore "unrealized gains or losses do not pass through their income statements,"¹⁶⁰ "if the recent credit spread widening does not reverse over the coming quarters," "...Freddie could recognize an other than temporary impairment of between \$1-5 billion (for a 1-10% price move in the securities) in 2008."¹⁶¹ While

¹⁵⁷ Freddie Mac Q3 2007 Press Release, page 2.

¹⁵⁸ Freddie Mac Q3 2007 Press Release, page 3.

¹⁵⁹ Freddie Mac Q3 2007 Press Release, page 3 (underline added).

¹⁶⁰ Citibank, "GSEs: Clarification of Subprime Exposure," July 27, 2007.

¹⁶¹ Credit Suisse, "Hostile Environment Weighs on Q3 Results; Sizable Capital Raise Needed," November 21, 2007 ("While the company indicated its non-agency AAA subprime portfolio should not be subject to impairment, we believe that if the recent credit spread widening does not reverse over the coming quarters, we believe that Freddie could recognize an other than temporary impairment of between \$1-5 billion (for a 1-10% price move in the securities) in 2008.").

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unrealized mark-to-market losses on the non-agency securities in the retained portfolio did not contribute to the reported GAAP net income \$2 billion loss on November 20, 2007, the possibility that such losses would need to be recognized in future quarters led to investor concerns as to whether Freddie Mac would have sufficient regulatory capital to meet their capital requirements, fulfill its government mandates, and take advantage of profitable growth opportunities.

113. Regarding its regulatory capital, Freddie also announced that “[e]stimated regulatory core capital was \$34.6 billion at September 30, 2007, which represented an estimated \$8.5 billion in excess of the regulatory minimum capital requirement, and an estimated \$0.6 billion in excess of the 30 percent mandatory target capital surplus directed by OFHEO,” and that “[r]etained portfolio sales in September and October largely reflected activities to manage to the 30 percent mandatory target capital surplus.”¹⁶² To “manage the 30% mandatory target capital surplus and respond to regulatory concerns, as well as to have the flexibility to manage its business,” Freddie Mac also announced that the company was considering very near term capital raising alternatives.¹⁶³ In the earnings conference call with analysts on November 20, 2007, Freddie Mac’s CFO Anthony Pisel commented that the capital raise would be a “large transaction,” not in common stock, and would likely be in the “very, very near term.”¹⁶⁴ On the same day, analysts predicted that Freddie Mac would need to raise around \$5 billion of capital.¹⁶⁵

114. Freddie Mac also clarified on the conference call that “[t]he reported [\$1.5 billion] losses on [interest rate] derivatives are economically offset by gains on our debt funding programs and retained portfolio securities. However, given the vagaries of GAAP accounting, these offsetting gains are not reflected in the income statement. So again, for another quarter, our reported results have been significantly depressed by mark-to-market effects.” And that “[t]his

¹⁶² Freddie Mac Q3 2007 Press Release, page 3.

¹⁶³ Freddie Mac Q3 2007 Press Release, page 3.

¹⁶⁴ Freddie Mac Q3 2007 Earnings Call, page 17.

¹⁶⁵ Fox-Pitt-Kelton, “We think capital raise will be dilutive to common shareholders,” November 20, 2007; Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

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GAAP accounting depresses our regulatory core capital, which is necessary for growth. It's also made it more difficult to communicate our results externally.”¹⁶⁶

115. As I discuss below, analysts understood that this capital/growth dynamic and mark-to-market losses could and did depress capital levels required by OFHEO regulations, impeding Freddie Mac's ability to take advantage of historic profitable growth opportunities presented by difficulties faced by Freddie's non-GSE competitors. Analysts also understood that the mark-to-market losses were driven by “[d]epressed market prices for illiquid assets which in some instances aren't reflective of the Freddie Mac assets being valued” and required by GAAP accounting.¹⁶⁷

116. Plaintiff claims that the observed price decline in Freddie Mac stock on November 20 represents a correction of earlier material disclosure defects and materialization of allegedly concealed risks demonstrating that the alleged fraud “proximately caused foreseeable losses” to OPERS.¹⁶⁸ As I explain below, this claim is not correct and not consistent with the economic evidence, including a full analysis of the market response to the information Freddie Mac reported on November 20, 2007, which must necessarily include the price recovery after Freddie Mac raised \$6 billion of capital by November 30.

C. Market reaction to Freddie Mac's November 20, 2007 announcement considering basic finance theory

1. Analyst reaction

117. Just prior to November 20, 2007, while some analysts expected Freddie Mac to report losses totaling \$1-5 billion which included “large mark-to-market losses” and “higher credit

¹⁶⁶ Freddie Mac Q3 2007 Earnings Call, page 5.

¹⁶⁷ Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

¹⁶⁸ TAC, ¶¶271.

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expenses,” Freddie Mac’s earnings announced that day missed consensus expectations.¹⁶⁹ For example, Credit Suisse analysts noted that “[t]he magnitude of the loss was nearly double our expectations” and was “exacerbated by higher derivative losses (falling interest rates and a weakening dollar), a significant reserve build during the quarter and higher credit related expenses.”¹⁷⁰

118. However, some analysts – including one of Plaintiff’s proposed experts here, Shapiro – were not surprised. Morgan Stanley analysts wrote that “3q07 results at Freddie were close to what we expected,” noting that while “[t]he credit business is growing, with losses rising modestly and g-fees starting to increase,” “non-cash GAAP markdowns and reserve builds are constraining regulatory capital, forcing the company to downsize its retained portfolio during a period when widening OAS spreads ought to be creating a substantial growth opportunity.”¹⁷¹ Bear Stearns analysts’ comments reflected the impact of the liquidity and mortgage market crisis and noted that “GAAP accounting resulted in market valuation adjustments on derivatives of \$1.4 billion and of about \$2.3 billion for credit,” and that “[d]epressed market prices for illiquid assets which in some instances aren’t reflective of the Freddie Mac assets being valued are creating economic problems by reducing the capital available to support security purchases.”¹⁷²

119. Market analysts also specifically attributed the mark-to-market losses to disclosed interest rate spread risks. Miller Tabak analysts in a November 20, 2007 report rated Freddie Mac a “STRONG BUY” and commented that “sooner or later there will be a cessation of the factors leading to the non-cash, nonoperating markdowns that make the GSEs’ earnings reports appear

¹⁶⁹ *Dow Jones News Service*, “UPDATE: Freddie Mac 3Q Loss Balloons, May Need Capital,” November 20, 2007, 8:10 ET (“In the third quarter, the McLean, Va., firm reported a net loss of \$2 billion, or \$3.29 a share, compared with \$715 million, or \$1.17 a share a year ago. ... The mean estimates of analysts polled by Thomson Financial were for a loss of 22 cents a share on revenue of \$1.33 billion.”).

¹⁷⁰ Credit Suisse, “Hostile Environment Weighs on Q3 Results; Sizable Capital Raise Needed,” November 21, 2007.

¹⁷¹ Morgan Stanley, “Freddie Mac: Reports 3Q07 Loss,” November 20, 2007.

¹⁷² Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

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complicated on the surface,” and that “[a]s soon as Treasury Bond yields hit a stable level, and as soon as Mortgage spreads over Treasuries hit a stable level, the great majority of those charges disappear.”¹⁷³

120. Contrary to the TAC’s claim that Freddie Mac’s November 20, 2007 announcement represents a correction of earlier material disclosure defects and materialization of concealed subprime and nontraditional mortgage risks, no analyst, even those surprised by the magnitude of the losses, asked on the earnings call that same day for more details on “subprime” or “non-traditional” loans in the Single-Family Guarantee Portfolio or questioned the veracity or detail of Freddie Mac’s disclosures that day (or prior disclosures) about the Single-Family Guarantee Portfolio. I have also reviewed all the available analyst reports issued in the week after the November 20 announcement and again, no analysts commented on the lack of details around “subprime” or “non-traditional” loans in the Single-Family Guarantee Portfolio or questioned the veracity or detail of Freddie’s disclosures that day.

121. Bear Stearns analysts, as noted above, specifically discussed Freddie Mac’s detailed FICO range disclosures for the Single-Family Guarantee Portfolio and noted that while, “Credit quality is deteriorating, reflecting the company’s exposure to recent vintage high LTV, low FICO, and Alt A loans,” “[s]till, we estimate that Freddie Mac’s credit risk is significantly below that reflected by non-conforming mortgages and by the market overall. For example, the delinquency rate on Freddie Mac’s low FICO score [i.e., < 620] risk of 2.86% at September 30 is significantly below an average of over 20% for outstanding non-conforming subprime mortgages.”¹⁷⁴

2. TAC’s incorrect claims

122. The TAC claims that “the November 20, 2007 press release admitted that the

¹⁷³ Miller Tabak, “FNM and FRE Price Action-Capital Levels and Even More Threatened Business Models,” November 20, 2007.

¹⁷⁴ Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

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Company had been investing in subprime, Alt-A and nontraditional mortgage products” and that “[s]ubstantially all the announced losses came from Freddie Mac’s investments in subprime, Alt-A and other nontraditional mortgages.”¹⁷⁵ As shown above, both claims are simply incorrect. On November 20, 2007 Freddie Mac did not admit that it had been investing in subprime, Alt-A and nontraditional mortgage products. Freddie Mac had already made detailed disclosures of its exposure to such mortgage products in the Single Family Guarantee Portfolio and also (a) its intention to increase exposure to nontraditional mortgages to “mirror the market,” (b) the fact that it expected its non-traditional mortgages to default at higher rates, and (c) its retained portfolio’s exposure to non-agency RMBS “subprime” and “Alt-A” portfolios of \$119 and \$55 billion, respectively, as of June 30, 2007. The TAC’s claim is also contradicted by my review of analyst questions on the November 20, 2007 conference call where no analysts expressed surprise on these issues.

123. The claim that “[s]ubstantially all the announced losses came from Freddie Mac’s investments in subprime, Alt-A and other nontraditional mortgages” is also simply incorrect. While I understand it is Plaintiff’s burden to prove that undisclosed risks caused losses, I nonetheless note that the economic evidence suggests that it was disclosed risks that led to losses. Mortgage delinquency rates were rising across the spectrum of home loan mortgages, including mortgages in the Single Family Guarantee Portfolio that are not at issue in this case, amidst the “worst housing downturn since the great depression.”¹⁷⁶ In addition, \$1.5 billion of the \$5 billion in Q3 2007 losses were from interest rate derivatives, wholly unrelated to the allegations.

124. Citing to the statement of facts set forth in Exhibit A to the Non-Prosecution Agreement (“NPA”) that Freddie Mac entered into with SEC on December 16, 2011 to “substantially support [its] claims,” the Plaintiff alleges that Freddie Mac misled investors as to

¹⁷⁵ TAC, ¶¶4, 227.

¹⁷⁶ See Gene Amromin and Anna L. Paulson, “Default Rates on Prime and Subprime Mortgages: Differences & Similarities,” *Federal Reserve Bank of Chicago*, 2010, page 1, cited above.

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the number of “Caution Loans (C1, C2)” and “‘Expanded Approval’ (or ‘EA’) loans” in its Single Family Guarantee Portfolio.¹⁷⁷ I understand that the Okongwu Report contains an analysis of the delinquency rates associated with Freddie Mac’s Caution loans as compared to subprime loans that were identified as such upon origination, and I assume that the results of his analysis are accurate. That analysis demonstrates that Freddie Mac’s Caution loans for vintage years 2005-2007 did not perform like subprime loans during the Relevant Period. They performed better.¹⁷⁸ This analysis is also inconsistent with the conclusion that allegedly undisclosed risk associated with Freddie Mac’s Caution loans caused Plaintiff’s losses.

125. The TAC also claims that Freddie Mac “knowingly skirted its 80% LTV requirement by so-called ‘piggyback loans’” and “did not disclose to what extent mortgages that it purchased were encumbered by piggyback loans until after the close of the Class Period.”¹⁷⁹ Piggyback loans, also called “simultaneous close seconds,” “are junior lien mortgage loans taken out concurrently with the first mortgage to finance [a] home purchase” and “are generally used by homebuyers to finance more than 80% of the house value without paying private mortgage insurance, at least if the first lien is GSE-financed.”¹⁸⁰ I reviewed Freddie Mac’s November 20, 2007 Q3 2007 Information Supplement, which provides details related to “piggyback” loans, noting that “as home prices increased during 2006 and prior years, many borrowers used second liens at the time of purchase which may reduce the original LTV ratio for the first lien to below 80%, thus avoiding requirements under our charter and underwriting standards for private mortgage insurance or other credit enhancements.”¹⁸¹ The disclosure also stated that while “[f]ive percent of loans in our

¹⁷⁷ TAC, ¶¶ 37, 61, 138.

¹⁷⁸ See Okongwu Report, Section 5.

¹⁷⁹ TAC, ¶¶ 64-65. While he does not opine on specific alleged misrepresentations or omissions and did not elaborate when asked in his deposition, in his deposition, Tabak did mention several times the TAC’s alleged misrepresentation related to “piggyback” loans which could have led to the LTV ratio of loans being “misstated.” Tabak Deposition, pages 140-143, 296.

¹⁸⁰ Michael LaCour-Little, Charles A. Calhoun, Wei Yu, “What Role Did Piggyback Lending Play in the Housing Bubble and Mortgage Collapse?” *Journal of Housing Economics*, Volume 20, 2011, pages 81-100 (“Yu, et al. (2011)”).

¹⁸¹ Q3 2007 Information Supplement, page 4.

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single-family mortgage portfolio had current LTV ratios above 90% at September 30, 2007, compared to 2% at December 31, 2006,” “[i]ncluding this secondary financing, we estimate that the percentage of loans underlying our single-family portfolio with total LTV ratios above 90% has risen to approximately 14% at September 30, 2007.”¹⁸² This implies that as of September 30, 2007 about 14% minus 5%, or 9%, of Freddie Mac’s single-family guarantee portfolio loans had piggyback seconds.

126. Analysts do not appear to have reacted to this disclosure. Like questions about alleged undisclosed details on “subprime” or “non-traditional” guarantee portfolio loans, no analysts asked on the earnings call that same day or commented in their reports in the week after November 20¹⁸³ about the new information provided on “piggyback” loans and the impact on LTV portfolio statistics. It is not surprising that no analysts commented on or asked about this detail following the November 20, 2007 earnings release, because it was widely known that “[p]iggyback lending played an important role in home sales, especially from 2004 to 2006.”¹⁸⁴ A 2007 Federal Reserve study found that “about 22 percent of the homes purchased in 2005 with a first lien also included a [“piggyback”] second lien, ... up from 14 percent in 2004.”¹⁸⁵ A later 2011 academic study in the *Journal of Housing Economics* found that piggyback lending “was involved in about 22% of the one-to-four family owner occupied home purchases in 2006.”¹⁸⁶ Thus, the market did *knew* about the greater prevalence of piggy-back loans than had been historically the case, and Freddie Mac’s portfolio compared favorably to than the market as a whole on this measure as it contained

¹⁸² Q3 2007 Information Supplement, page 4. The disclosure also noted “In general, higher total LTV ratios indicate that the borrower has less equity in the home at the time of origination and would thus be more susceptible to foreclosure in the event of a financial downturn.” (underline added).

¹⁸³ Note that this is based on the analyst reports available to me, which are listed in Appendix 2.

¹⁸⁴ Yu, et al. (2011), page 81, and Alan Greenspan and James Kennedy, “Sources and Uses of Equity Extracted from Homes,” Federal Reserve Board Staff Working Paper, 2007-20, page 33 (“According to data from HMDA, about 22 percent of the homes purchased in 2005 with a first lien also included a second lien, sometimes referred to as a “piggyback loan,” up from 14 percent in 2004.”).

¹⁸⁵ Alan Greenspan and James Kennedy, “Sources and Uses of Equity Extracted from Homes,” Federal Reserve Board Staff Working Paper, 2007-20.

¹⁸⁶ Yu, et al. (2011), page 81 citing Avery, R.B., Brevoort, K.P., Canner, G.B., 2007. The 2006 HMDA data. Federal Reserve Bulletin 93, A73–A109.

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far fewer piggyback loans (9% for Freddie Mac vs. about 22% for the broader market). Also, while a mortgage with a certain LTV that includes a piggyback loan has higher credit risk than a mortgage with the same LTV without a piggyback loan, the second mortgage amount in a piggyback loan is subordinate to the first mortgage and does provide an equity cushion. Plaintiff's implication that Freddie Mac's undisclosed "piggyback" loan details represented a material misstatement or omission does not appear to have support in the economic evidence.

127. Moreover, the total mortgage portfolio held by Freddie Mac and Fannie Mae as of September 30, 2007 was \$4.8 trillion, which represents approximately a 40% share of the U.S. residential mortgage debt outstanding.¹⁸⁷ Freddie Mac and Fannie Mae buy loans from the largest loan originators in the U.S.¹⁸⁸ They provide their originators with a series of mortgage underwriting guidelines.¹⁸⁹ Thus, given the size of the market share held by Fannie Mae and Freddie Mac, the number of mortgage market participants and millions of borrowers, millions of people would have known about piggy back loans and therefore the fact that Freddie Mac's portfolio likely included loans that were accompanied by piggy back loans. For this reason as well, the economic evidence is inconsistent with a conclusion that the disclosure or lack of disclosure of piggy back loans was economically significant.

3. The market was concerned with Freddie Mac's future ability to raise capital.

128. While not asking questions about Freddie Mac's mortgage characteristic disclosure details related to subprime and nontraditional mortgages and the Single Family Guarantee

¹⁸⁷ As of December 31, 2006, Freddie Mac and Fannie Mae held \$1.8 trillion and \$2.5 trillion, respectively while the U.S. residential mortgage market debt outstanding was \$10.9 trillion. And, as of September 30, 2007, Freddie Mac and Fannie Mae held \$2.0 trillion and \$2.8 trillion, respectively while the U.S. residential mortgage market debt outstanding was \$11.8 trillion. *See* Q3 2007 Information Supplement, page 45; Fannie Mae Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2007, dated Feb. 27, 2008 ("Fannie Mae 2007 Annual Report"), page 1 and ("Fannie Mae 2005 Annual Report"), page 2; Freddie Mac 2006 Annual Report, page 2.

¹⁸⁸ Freddie Mac 2006 Annual Report, page 2.

¹⁸⁹ Freddie Mac 2006 Annual Report, page 66.

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Portfolio, analysts did express concern about Freddie Mac's need to raise capital given the mark-to-market and credit provision losses and related heightened regulatory risk.

129. For example, after asking "point blank, did you go to OFHEO and ask for relief on the 30% capital surcharge" on the earnings call with analysts,¹⁹⁰ Fox-Pitt Kelton analysts (including Shapiro) commented in a report later that day: "It is clear to us from the earnings call that FRE first spoke to OFHEO about capital relief and received a negative response — it seems OFHEO would rather dilute shareholders to protect the agency's safety and soundness."¹⁹¹ Fox-Pitt Kelton analysts (including Shapiro) noted in another report that day covering both Freddie Mac and Fannie Mae that "the dictates of the GAAP accounting treatment mean large mark-to-market losses and credit costs have risen" which "has placed a strain on capital adequacy, at least relative to the 30% OFHEO surcharge" and "given the significant rise in credit costs, it is possible that OFHEO could delay reducing the surcharge for safety and soundness reasons." They concluded that being "[c]apital constrained and unable to grow is not a recipe for outperformance," and "[i]n our opinion, FRE will need to raise at least \$5.5 b of capital to shore up its capital base and provide for growth opportunities over the next year" which "will be very expensive for common shareholders."¹⁹²

130. Citibank analysts commented that "[t]he upshot is that FRE is impacted by current market challenges, its GAAP accounting tends to emphasize the negatives while masking the positives, and its capital strength is in question. Nevertheless, we believe FRE will continue to guarantee and invest in mortgage-related securities, performing an important liquidity/stability function - reinforced by any new capital raised."¹⁹³ Merrill Lynch analysts, in a report titled "Big equity offering seems likely; Common & Preferred," observed that "Capital is the key issue," with

¹⁹⁰ Freddie Mac Q3 2007 Earnings Call, page 13.

¹⁹¹ Fox-Pitt Kelton, "We think capital raise will be dilutive to common shareholders," November 20, 2007.

¹⁹² Fox-Pitt Kelton, "FNM and FRE: Capital Constrained – Downgrading to Underperform," November 20, 2007.

¹⁹³ Citibank, "Losses Spur Need for New Capital; Charter/Mission Intact," November 20, 2007.

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the “capital raising campaign likely larger than expected,” that “Freddie Mac will need to raise roughly \$7B in capital over the next year to meet its regulatory capital requirements, as we think it could realize GAAP losses through 2009,” and while they did “not think FRE is broken,” “the need to raise substantial amounts of capital in this market will largely make it look that way.”¹⁹⁴

131. Analyst Jaret Seiberg of the Stanford Group noted that “[i]n the short term ... the [Q3 Earnings news] puts Freddie Mac under heightened regulatory and legislative risk. But over the long term, he said in a note, that risk should diminish ... [as] Fannie [Mae] (FNM) and Freddie are nearly the only players left in the mortgage securitization game and we expect the next administration to be much more friendly to them. Those are long-term positives.”¹⁹⁵

132. Analysts also directly linked Freddie Mac’s losses and reduced capital levels to the ongoing liquidity crisis and broader turmoil in financial markets and “non-cash” GAAP markdowns. As noted above, Bears Stearns analysts stated that, “[d]epressed market prices for illiquid assets which in some instances aren't reflective of the Freddie Mac assets being valued are creating economic problems by reducing the capital available to support security purchases.”¹⁹⁶ The analysts also noted that “[w]e estimate the company may seek to raise \$3-5 billion” and that while “[e]arly next year when the 30% surplus capital requirement is lifted, there should be a substantial capital excess,” but “[u]ntil then, though the company's ability to provide liquidity and support the mortgage market may be limited.” Morgan Stanley analysts wrote that “non-cash GAAP markdowns and reserve builds are constraining regulatory capital, forcing the company to downsize its retained portfolio during a period when widening OAS spreads ought to be creating a substantial growth opportunity” and “[u]nfortunately, in the current environment, GAAP losses

¹⁹⁴ Merrill Lynch, “Big equity offering seems likely; Common & Preferred,” November 21, 2007. (underline added).

¹⁹⁵ *Dow Jones Business News*, “UPDATE: Freddie Mac's Loss More Than Doubles; Firm May Halve Dividend,” November 20, 2007.

¹⁹⁶ Bear Stearns, “Freddie Mac (FRE-\$26.74-Peer Perform): GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

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create a perception that the company's business model is struggling.”¹⁹⁷

133. Miller Tabak analysts noted concerns that Freddie Mac's capital raise might “fail,” and that while there could be “a cessation of the factors [including increases in ‘Mortgage spreads over Treasuries’] leading to the non-cash, non-operating markdowns that make the GSEs’ earnings reports appear complicated on the surface,” which would “make, the great majority of those charges disappear.” These GAAP markdowns, “however, reduce the reported capital levels of the two GSEs, severely constraining their ability to do new business without their raising new capital.”¹⁹⁸ And while Freddie Mac on November 20, 2007 “has already announced its intention to sell a large new issue of preferred stock,” “[i]f that effort fails, there might be more room on the downside for the stock, but the business model is firmly intact.”¹⁹⁹

4. Importance of capital for Freddie Mac's future growth

134. To further understand Freddie Mac's November 20 equity market value decline, it is useful to consider basic financial economic theory of stock market prices. Financial theory holds that market prices of stocks can be thought of as the sum of (a) the value derived from business activities (assets) already in place and (b) the current value of expected future investment and growth opportunities, represented by the abbreviation PVGO (present value of future growth opportunities).²⁰⁰

135. Applying this framework to Freddie Mac's stock market value as of November 20, 2007, the PVGO was heavily dependent on Freddie Mac's OFHEO mandated 30% target capital surplus requirement. As illustrated above, analysts extensively explained and discussed the importance of OFHEO mandated regulatory capital limits. They viewed Freddie Mac's future

¹⁹⁷ Morgan Stanley, “Freddie Mac Reports 3Q07 Loss,” November 20, 2007.

¹⁹⁸ Miller Tabak, “FNM and FRE Price Action – Capital Levels and Even More Threatened Business Models,” November 20, 2007. (emphasis added).

¹⁹⁹ Miller Tabak, “Huge Valuation Meltdown Tied to Credit Concerns, Likely Dividend Cut Cutting 2009 Price Target to \$51.50, Maintain ‘Strong Buy,’” November 21, 2007.

²⁰⁰ See, e.g., Richard A. Brealey, Franklin Allen and Stewart C. Meyers, *Principles of Corporate Finance*, 10th Ed., (“Brealey, Allen, and Meyers”), pages 88-89.

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business growth prospects and ability to achieve its government mission of providing liquidity support to be “beneficiaries of the turmoil in mortgage markets.”²⁰¹ They also explained the impact of “non-cash” GAAP markdowns driven by “[d]epressed market prices for illiquid assets”²⁰² which could limit “growth opportunities” by “constraining regulatory capital”²⁰³ unless, as Freddie Mac told investors it intended to do, the Company raised a “large” amount of capital to remain in compliance with OFHEO limits. Even though much of these markdowns were simply phantom “non-cash” accounting losses required by GAAP accounting rules that were not expected to be realized, Freddie Mac still had to recognize the losses as reductions in core capital, even when it may have also had equal offsetting gains, which again, given the technicalities of GAAP accounting rules, it could not account for in its regulatory core capital.²⁰⁴

136. Returning to the financial formula discussed above, the PVGO was also expected to be large. As Fox-Pitt analysts (including Shapiro) wrote in their August 22, 2007 report Initiating Coverage with an “Overweight” rating:

*Fannie Mae and Freddie Mac are finally set to emerge from their long restatement morass with new accounting procedures and operating systems in place. A Democratic Congress and fears of a broader meltdown in the housing sector have resulted in a new-found appreciation of the GSE role in housing finance and rising risk premia mean that investment and guaranty growth opportunities are better than they have been in some time. Credit costs are likely to rise, but this will be partially offset by a decline in operating costs.*²⁰⁵

²⁰¹ Fox-Pitt Kelton, “FNM and FRE: Capital Constrained – Downgrading to Underperform,” November 20, 2007.

²⁰² Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

²⁰³ Morgan Stanley, “Freddie Mac Reports 3Q07 Loss,” November 20, 2007.

²⁰⁴ See, e.g., Freddie Mac Q3 2007 Earnings Call, page 5 (“During the third quarter, we recorded \$1.5 billion in interest rate related mark-to-market losses, shown here on line three. Remember, we manage our interest rate exposures to very low levels. The reported losses on derivatives are economically offset by gains on our debt funding programs and retained portfolio securities. These offsetting gains are not reflected in the GAAP income statement. So again, for another quarter, our reported results have been significantly depressed by mark-to-market effects. This GAAP accounting depresses our regulatory core capital, which is necessary for growth.”).

²⁰⁵ Fox-Pitt Kelton, “Fannie Mae, Freddie Mac: Gulliver freed from the Lilliputians,” August 22, 2007. (emphasis added).

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And similarly in their November 20, 2007 report, Fox-Pitt analysts wrote that “[o]ur investment thesis had assumed that Fannie Mae and Freddie Mac would be net beneficiaries of the turmoil in the mortgage markets and be able to grow both sides of their businesses at wider spreads and higher premium rates.”²⁰⁶

137. Given the potentially large PVGO which depended on capital available to take advantage of the growth opportunities, but was limited by regulatory limits, Freddie Mac’s announced losses constrained regulatory capital which in turn constrained growth opportunities. These opportunities were considered important and valuable in an environment of real estate turmoil where private players were dropping out of the market and GSEs were expected to fill the void.

138. Viewed within this economic framework, it is not surprising that Freddie Mac’s stock price declined significantly on November 20, at least, from the perspective of a market participant concerned that Freddie Mac may not be able to raise enough new capital at a reasonable cost.

139. Some analysts also considered the price decline an overreaction. Miller Tabak analysts noted that the price reaction was “overdone” and potentially driven by “fear,” concluding that “there is nothing in their reported operating business cash flows that remotely justifies the price action seen over the past three trading days.”²⁰⁷ Citibank analysts noted that “[w]hile the capital raise and dividend cut are painful for existing shareholders, we believe the recent 30% pull-back in FRE's shares more than discounts the bad news - as some investors expected high dilution” and “[m]oreover, we continue to view FRE’s long-term outlook as positive.”²⁰⁸ Even prior to November 20, 2007, Merrill Lynch analysts observed in an October 24, 2007 report that Freddie Mac and Fannie Mae “remain under pressure as the market rotates out of stocks exposed to the

²⁰⁶ Fox-Pitt Kelton, “FNM and FRE: Capital Constrained – Downgrading to Underperform,” November 20, 2007.

²⁰⁷ Miller Tabak, “FNM and FRE Price Action – Capital Levels and Even More Threatened Business Models,” November 20, 2007.

²⁰⁸ Citigroup, “Capital Actions Announced; Terms TBD,” November 28, 2007. (underline added).

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deteriorating housing market,” and while “[b]oth stocks have been viewed as good flight-to-quality stocks, as each has largely avoided the riskiest loans originated during the credit bubble and had benefited from a more favorable regulatory backdrop emanating from Washington,” “[we think, however, that] investors have systematically avoided or rotated out of stocks that have significant exposure to weakening housing fundamentals putting FNM and FRE in the path of fear-induced selling.”²⁰⁹

140. Hence, the potential negative overreaction on November 20, 2007 could be due to the market for Freddie Mac’s stock being driven by fear and not being efficient. As Plaintiff’s expert Tabak has recognized, economists have noted and studied the inconsistency between market efficiency and overreaction and underreaction in stock markets and how “one may diverge from the predictions of the EMH [efficient market hypothesis] in different ways, depending on the particular circumstances being studied.”²¹⁰

141. Regardless of whether the market for the stock was efficient (which Plaintiff has not established), or not, as I explain next, viewing the November 20, 2007 price decline in isolation is an incomplete and biased view of the market reaction to the information the Company reported that day. This is because within the next few trading days, the market’s concerns about Freddie Mac not having access to sufficient capital at a reasonable cost were proven to be wrong and Freddie Mac’s stock price largely recovered when Freddie Mac completed a \$6 billion preferred share capital raise on November 30, 2007 on favorable terms.

²⁰⁹ Merrill Lynch, “GSE stocks come into focus due to credit exposure,” October 24, 2007. (underline added)

²¹⁰ See, e.g., Paul A. Ferrillo, Frederick C. Dunbar, and David Tabak, “The ‘Less Than’ Efficient Capital Markets Hypothesis: Requiring More Proof from Plaintiffs in Fraud-on-the-Market Cases,” *St. John’s Law Review*, Issue 1 Volume 78, Winter 2004, pages 108-111 (“The overall evidence on short-term overreaction or underreaction is somewhat uncertain, with different studies providing apparently contradictory results, though most financial economists now accept that one may diverge from the predictions of the EMH in different ways, depending on the particular circumstances being studied.”).

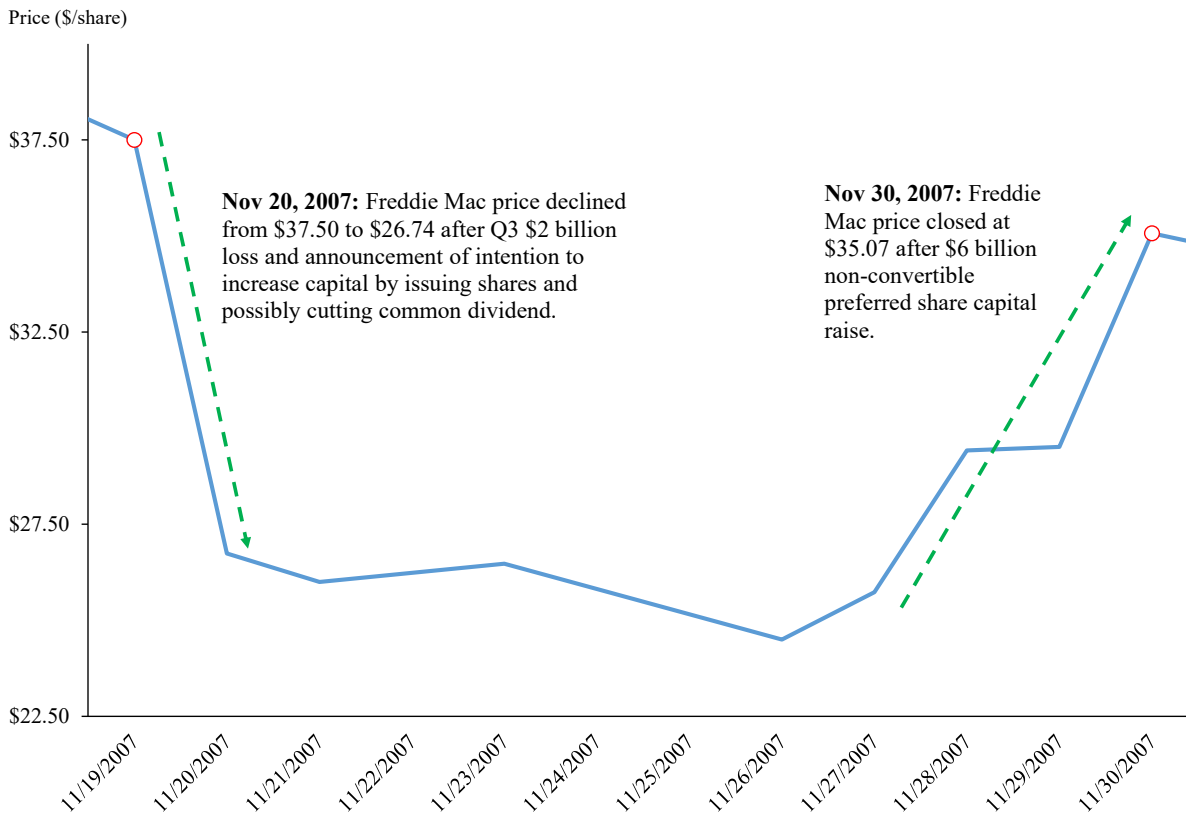
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D. Freddie Mac's stock recovered after Freddie Mac priced and completed \$6 billion non-convertible preferred stock capital raise on November 30, 2007

142. While Freddie Mac's stock declined on November 20, 2007 following the Q3 2007 announcement and concerns over the effect of the losses on limited capital constraining valuable growth opportunities, the stock recovered by November 30, 2007 as Freddie Mac priced and completed a \$6 billion non-convertible preferred stock capital raise, which Freddie Mac previewed on November 20 as part of an effort to increase capital levels. This rebound must be considered in evaluating loss causation.

143. Figure 7A shows the Freddie Mac's stock price movement over this period. This price recovery does not support the TAC's claim that material allegation-related information about previously unknown and concealed risks caused losses to Plaintiff. It demonstrates that there was no statistically significant portion of the stock price reaction on November 20 that was attributable to any alleged fraud. Rather, it shows that the price reactions were attributable to the market's concerns about Freddie Mac's access to capital in a difficult market environment and unprecedented credit turmoil and its relief that Freddie Mac was able quickly to obtain low cost capital, leaving no amount of stock price reaction attributable to Plaintiff's allegations.

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Figure 7A: Freddie Mac stock recovered after \$6 billion preferred share capital raise

Notes and Sources: Market data obtained from CRSP; news information obtained from various Factiva articles and Freddie Mac press releases.

144. On November 27, there was news that Freddie Mac was planning to sell \$5 to \$6 billion in perpetual preferred stock that week with a coupon fixed at 8.25% for five years,²¹¹ lower than the 8.75% coupon reported the prior day.²¹² After the market closed on November 27, Freddie Mac announced that it would issue “\$6 billion of noncumulative, perpetual preferred stock” and that the issuance was “expected to price in the near term.”²¹³ It would include a “larger offering of nonconvertible preferred shares and a substantially smaller offering of convertible preferred shares.”²¹⁴

²¹¹ *Dow Jones Capital Markets Report*, “Freddie Mac To Sell Up To \$6B Perpetual Preferred Stk-Source,” November 27, 2007, 13:56:00.

²¹² *Reuters News*, “Investors eye high-yielding Freddie Mac preferreds,” November 26, 2007, 16:35:00.

²¹³ *Dow Jones News Service*, “Freddie Mac Declares Qtrly Dividends,” November 27, 2007, 16:26:00.

²¹⁴ *Dow Jones News Service*, “Freddie Mac Declares Qtrly Dividends,” November 27, 2007, 16:26:00.

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145. Merrill Lynch analysts, in a November 27, 2007 report, noted that Freddie Mac “announced, after the close, that it intends to issue \$6B of preferred stock to achieve its regulatory capital requirement and to position it to pursue its mission objectives, confirming the high-end of the range floated earlier in the trading day.”²¹⁵ They further observed that “[t]he market responded favorably to the earlier discussion of a \$5-\$6b preferred deal, in combination with a strong tape, though we think the pricing and ultimate split on straight preferred to convertible could play a leading role in market demand,” but that “[s]till, the FRE deal is large and the preferred market is crowded, based on comments from the ML Preferred Strategist, so we think pricing and structure will remain a point of uncertainty until the deal is completed.” They also confirmed the “price talk earlier in the day” of an 8.25% coupon, which they thought “seems somewhat aggressive.”

146. Speculation about the capital raise continued on November 28, with news reports speculating on the yield²¹⁶ and additional conjecture about the nonconvertible and convertible tranches of the issue. The nonconvertible tranche was expected to be between \$4 billion and \$5 billion, and the convertible tranche between \$1 billion and \$2 billion. The nonconvertible piece was expected to be pegged at a coupon of 8.5%-8.75% for five years, which would reset after five years to float over the three-month London interbank (Libor) offered rate. The convertible deal’s coupon was expected to be between 8.25% and 8.50%.²¹⁷

147. On November 29, Freddie Mac provided an update on the \$6 billion offering indicating that the issuance would involve “an offering only of non-convertible non-cumulative perpetual preferred stock,” and that it would not involve convertible non-cumulative perpetual preferred stock.²¹⁸ During the day there was speculation of the issuance being five times

²¹⁵ Merrill Lynch, “Preferred offering a modest positive,” November 27, 2007.

²¹⁶ *Reuters News*, “UPDATE 3- Freddie Mac shares post biggest gain in 19 years,” November 28, 2007, 11:16:00.

²¹⁷ *Dow Jones Capital Markets Report*, “Freddie Mac Non-Conv Pfd Pegged At 8.5%-8.75% Coupon-Sources,” November 28, 2007, 14:28:00.

²¹⁸ *PR Newswire (U.S.)*, “Freddie Mac Provides Update On Preferred Stock Offering”, November 29, 2007, 09:30:00.

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oversubscribed and further speculation of the dividend yield between 8.375% and 8.5%.²¹⁹ Before the market closed on November 29, news sourcing investors familiar with the deal reported that Freddie Mac had sold \$6 billion of non-convertible, non-cumulative, perpetual preferred stock at a dividend of 8.375% fixed for five years, after which the dividend would float over three-month Libor.²²⁰

148. Freddie Mac announced the sale of only non-convertible “straight” preferred shares after market close on November 29 and said that the shares were expected to be issued on December 4, 2007. As noted below, non-convertibility was “welcome news to common shareholders concerned about dilution” because the potential for converting the preferred shares to common would decrease the percentage of ownership of existing common shareholder and could lead to a decrease in value.²²¹ Freddie Mac provided more details on the preferred dividend rate of 8.375% being fixed through December 31, 2012, after which the “dividend rate would be the higher of 3-month LIBOR plus 416 basis points, or 7.875%.” Freddie Mac also announced that it would have “the option to redeem all or part of the shares on December 31, 2012 and on each fifth anniversary thereafter, at \$25 per share plus accrued dividends.”²²²

149. As illustrated by the response of Freddie Mac’s stock price (see Figure 7A above and 7B below), this successful capital raise alleviated market concerns about Freddie Mac’s ability to raise preferred capital during the severe market turmoil on favorable pricing terms that were non-convertible and non-dilutive to common shareholders.

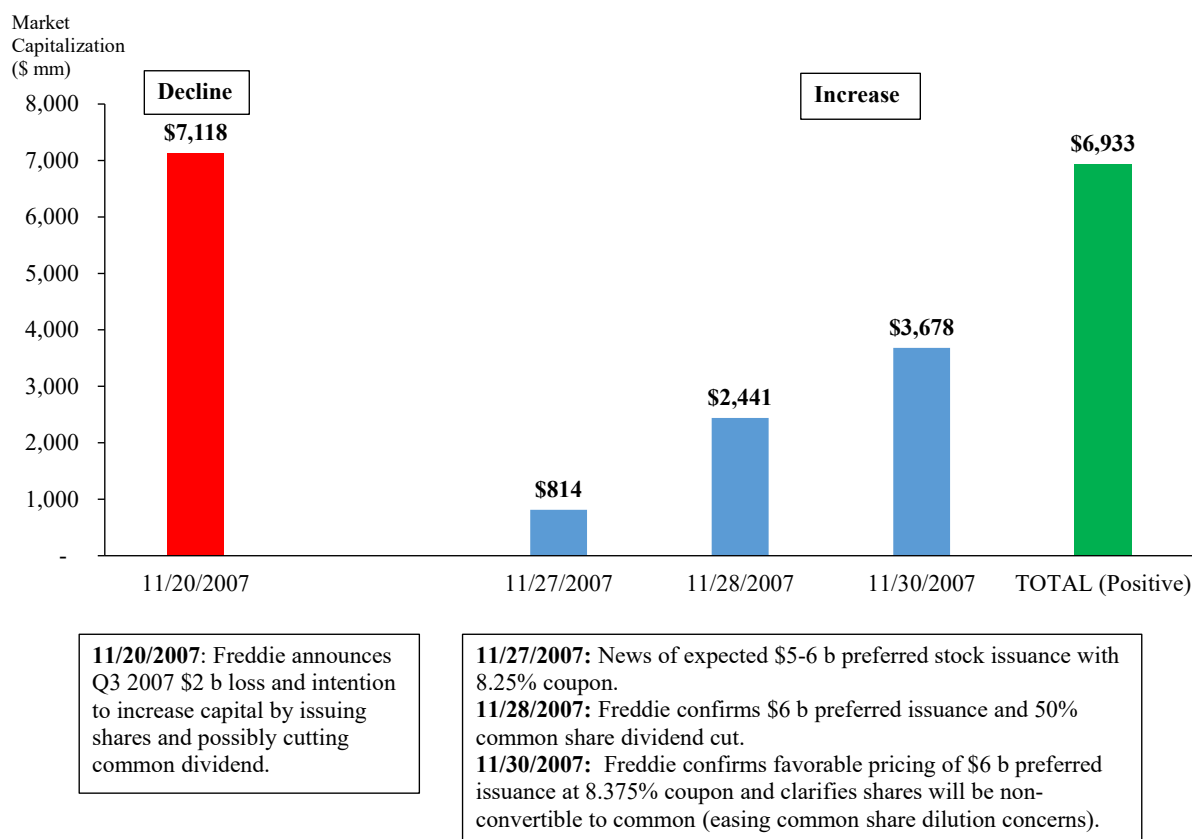
²¹⁹ *Bloomberg News*, “Freddie Mac Offers Preferred Stock at 8.5 Percent Yield,” November 29, 2007, 10:19:34; *Bloomberg News*, “Freddie to Sell Only Non-Convertible Preferred Shares (Update1),” November 29, 2007, 11:07:41; *Bloomberg News*, “Freddie preferred stock deal 5 times oversubscribed, according to source,” November 29, 2007, 11:11:41; *Reuters News*, “Freddie Mac \$6 bln preferred deal seen at 8.375 pct,” November 29, 2007, 13:35:00; *Bloomberg News*, “Freddie Mac Launches Preferred Sale With Yield Of 8.375%,” November 29, 2007, 14:39:57; *Bloomberg News*, “Freddie to Sell Only Non-Convertible Preferred Shares (Update3),” November 29, 2007, 14:49:36.

²²⁰ Briefing.com, “Freddie Mac sells \$6 bln preferred stock at 8.375% dividend,” November 29, 2007, 15:36:35.

²²¹ Lehman Brothers, “Erratum: Updating Ests for Capital Raise,” December 3, 2007.

²²² Freddie Mac, Supplement to March 23, 2007 Information Statement, Unregistered Sales of Securities, November 30, 2007. *Reuters News*, “Freddie Mac sells \$6 bln preferred shares,” November 29, 2007, 16:24:00; *PR Newswire (U.S.)*, “Freddie Mac Prices Offering of Non-Convertible Non-Cumulative Perpetual Preferred Stock,” November 29, 2007, 16:45:00.

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Figure 7B: Freddie Mac stock recovered after \$6 billion preferred share capital raise

Notes and Sources: Market data obtained from CRSP; news information obtained from various Factiva articles and Freddie Mac press releases.

150. As the figure shows, over this period Freddie Mac's price declined by 0.75% across these four days. Freddie Mac's market capitalization declined by \$7.118 billion on November 20 and increased by \$6.933 billion on November 27, 28, and 30, 2007, a decline of \$0.185 billion. This \$0.185 billion decline across the four dates represents a 0.75% decline from Freddie Mac's market capitalization of \$24.808 billion as of market close on November 19, 2007.²²³ This 0.75% decline in market capitalization is economically insignificant.

151. Fannie Mae's stock followed a similar pattern. After declining 24.8% on November 20, 2007 from the prior trading day close of \$37.58, the stock price increased on the Freddie Mac capital raise dates.²²⁴ Fannie Mae's stock increased 1.66%, 9.86%, and 18.62% on November 27,

²²³ Data obtained from CRSP.

²²⁴ Data obtained from CRSP.

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28 and 30, 2007 (respectively), closing at \$38.42 on November 30. Fannie Mae's stock market capitalization declined by \$9.1 billion on November 20, 2007 and increased cumulatively \$9.4 billion across the Freddie Mac capital raise dates.

152. Consistent with the application of the basic PVGO formula discussed above to Freddie Mac's November 20, 2007 price decline, analysts and news media commented favorably on Freddie Mac's capital raise. Thomson Financial news noted that "Shares of Freddie Mac continued to rally Friday after the company priced its \$6 billion fixed-to-floating rate non-convertible non-cumulative perpetual preferred stock at \$25 a share."²²⁵ Lehman Brothers analysts on December 3, 2007 commented in detail on the capital raise and its positive implication for future business growth:

*Following a 2-day road show, FRE placed \$6B of preferred equity at a rate of 8.375% to bolster its capital position for this challenging turn in the mortgage cycle. Excess capital now stands at \$14.5B, \$6.5B above OFHEO requirements (keep in mind that this could drop by close to \$2B if FRE takes a 4Q07 GAAP loss comparable to 3Q07, as expected). The securities were all straight preferred (no convertible preferred), which was welcome news to common shareholders concerned about dilution. The incremental capital should rebuild a capital cushion, absorb future credit costs, and provide room for modest incremental balance sheet growth.*²²⁶

Analysts from Bank of America noted in a November 29, 2007 report (prior to the November 30, 2007 Freddie Mac confirmation of pricing of the offering) that:

*Yesterday after market close, FRE declared a \$0.25 4Q07 dividend and announced plans to issue \$6 billion of preferred stock a small amount of which would be convertible. The company did not provide a specific breakout, nor is pricing yet known. We view FRE's preferred offering as in-line with our expectations and a positive for the company, since it will provide them with capital to meet their regulatory requirement, not to mention new business potential.*²²⁷

153. Freddie Mac CDS spreads (which track the cost of insuring against default on the

²²⁵ AFX Asia, "Shares of Freddie Mac Rally; \$6B Preferred Stock Offering Priced Thursday," December 1, 2007.

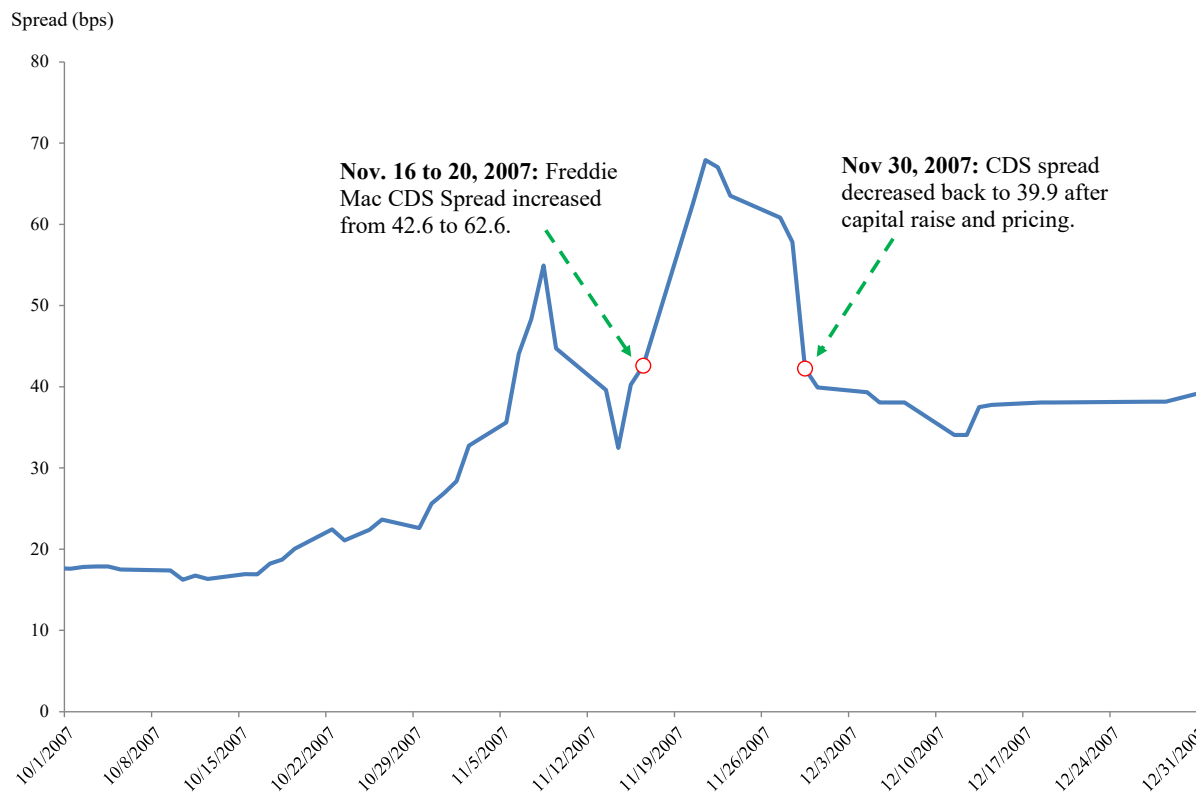
²²⁶ Lehman Brothers, "Erratum: Updating Ests for Capital Raise," December 3, 2007.

²²⁷ Bank of America, "Freddie Mac," November 29, 2007. (underline added)

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underlying Freddie Mac debt securities), shown in Figure 8 below, also declined following the capital raise to pre-November 20, 2007 levels, further demonstrating easing of market concern about Freddie Mac's financial prospects.

Figure 8: Freddie Mac CDS spread declined to pre-November 20, 2007 levels following completion of November 30, 2007 capital raise.

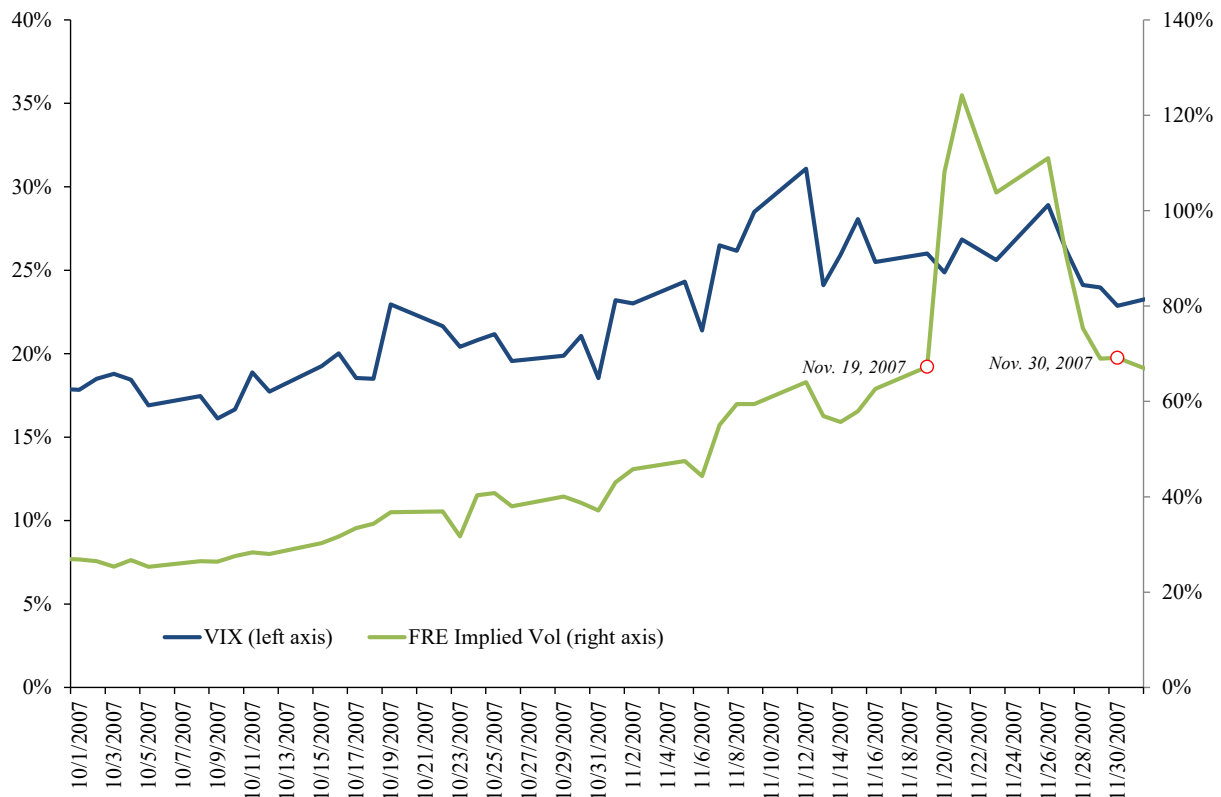


Notes and Sources: Freddie Mac 5yr Senior CDS Spread (FHLMC CDS USD SR 5Y D14) obtained from Bloomberg LP.

154. Similarly, as shown in Figure 9, Freddie Mac's stock option implied volatility also declined by November 30, 2007 back to the pre-November 20, 2007 level, again further demonstrating easing of market concern about the uncertainty of Freddie Mac's financial prospects.

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Figure 9: Freddie Mac's Implied Volatility declined to pre-November 20, 2007 level by November 30, 2007.



Source: VIX data obtained from Bloomberg. FRE Implied Volatility obtained from Option Metrics. Implied volatility is computed by OptionMetrics, a well-known provider of such data, through prices of 30-day call options traded on the Company's stock.

E. The market's full reaction to the alleged corrective disclosure and materialization of concealed risk, including the cumulative stock return across the "capital raise dates," was not statistically significantly negative.

155. To further analyze Plaintiff's claim that the price decline following Freddie Mac's November 20, 2007 announcement represented the impact of a corrective disclosure and materialization of concealed risk, I created a market model to analyze the company-specific stock returns after controlling for market-wide and industry-wide factors. This model shows that even after controlling for these non-company specific effects, Freddie Mac's stock price reaction on the

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full set of dates required to properly analyze the market reaction to the information Freddie Mac released on November 20, 2007 (November 20, 2007 plus the three dates when the market learned details about Freddie Mac's capital raise -- November 20, 27, 28, and 30, 2007, collectively the "capital raise dates"), was statistically insignificant and hence not distinguishable from zero. This analysis is explained in detail and the results are summarized in Appendix 4.

156. Despite trying with two previous experts, Plaintiff has not successfully demonstrated that Freddie Mac stock traded in an efficient market during the period at issue. Tabak has not opined on market efficiency in this matter and testified in this deposition that he is "agnostic" on the issue.²²⁸ Of course, either the market is efficient, or it is not. Given the results of my statistical market model analysis, that Freddie Mac's stock reaction collectively on the "capital raise dates" (i.e., the complete market reaction to the information Freddie Mac released on November 20, 2007) was statistically insignificant and hence not distinguishable from zero, this means that either (1) if the market is efficient, the market concern over Freddie Mac's capital position raised by the losses announced on November 20, 2007 was alleviated by November 30, 2007 and this confirms the alleged misrepresentations and omissions did not cause losses to OPERS;²²⁹ or (2) the market is inefficient and it overreacted on November 20, 2007 (consistent with some analysts saying reaction was "overdone") and recovered by November 30, 2007.

157. In either case there is no loss causation. The economic evidence does not support the TAC's claim that material allegation-related information about previously unknown and concealed risks, which were allegedly revealed on November 20, 2007 caused losses to OPERS.

F. The Alleged Misrepresentations and Omissions Lacked Economic Significance.

158. The lack of a statistically significant stock price reaction attributable to the alleged misrepresentations and omissions makes sense, from an economic perspective, when one considers

²²⁸ Tabak Deposition, at 22:11-15.

²²⁹ The lack of statistical significance.

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Freddie Mac's detailed credit risk disclosures. For example, given the detailed disclosures that I discuss above, the allegation that it was a material omission for the Company not to disclose the share of its portfolio comprised of mortgages with certain internal designations, such as C1, C2 or EA, is illogical. As I have discussed above, Freddie Mac made detailed disclosures about the credit characteristics of its Total Single Family Mortgage Portfolio, which investors could use to gauge the Company's credit risk profile. For instance, given the Company's disclosures about the percentage of its mortgage portfolio to borrowers with different categories of FICO scores, investors could readily calculate the share of the Company's mortgage portfolio that consisted of loans to borrowers with FICO scores less than 660, or 620, by simply adding certain disclosed line items in Freddie Mac's Annual Reports.

159. Freddie Mac's disclosed mortgage credit risk characteristics are relevant from an economic perspective because they help shareholders gauge the Company's expected losses due to credit risk. As I also discussed above, the Company also provided detailed disclosures about its portfolio's mortgage performance, expected losses and its provisions for credit losses. In addition, the Company disclosed in its public reports a number of other risks facing the Company, as I discuss above and as set forth in the Okongwu Report. Given this wealth of disclosed facts about the risks facing Freddie Mac and the lack of a statistically significant result to my event study, I conclude that the alleged misrepresentations and omissions lack economic significance.

VI. Tabak does not establish materiality or loss causation.

A. Summary

160. I have previously submitted expert reports in this matter responding to Plaintiff's first economic expert, Hallman as well as their second economic expert, Feinstein.²³⁰ In my expert report responding to Hallman, I concluded that Hallman failed to establish that Freddie Mac stock

²³⁰ Expert Report of Mukesh Bajaj, December 14, 2012 (addressing expert report of Dr. Greg Hallman); Expert Report of Mukesh Bajaj, PH.D., September 1, 2017 (addressing expert report of Steven Feinstein).

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traded in an efficient market during the Relevant Period, and that the economic evidence does not support a finding that the alleged misrepresentations and omissions inflated the price of Freddie Mac's common stock or that they were economically significant. In my expert report responding to Feinstein, I concluded that Feinstein also failed to establish that Freddie Mac common stock traded in an efficient market during the Relevant Period, and I also concluded that economic evidence supports a finding that the alleged misrepresentations and omissions had no impact on the price of Freddie Mac's common stock. This Court ruled that "OPERS has failed to establish market efficiency" and that "the alleged misstatements ... did not impact Freddie Mac's stock price."²³¹

161. Plaintiff's expert, Tabak, states that he examined "whether the record evidence would allow for economic opinions on the relevance and importance of the alleged misrepresentations and omissions that would allow a trier of fact to conclude that those alleged misrepresentations and omissions were material."²³² He concludes that "there is evidence in the record that is relevant to an understanding of the effect of the alleged misrepresentations and omissions on the market's valuation of Freddie Mac" and that that evidence shows Freddie Mac's November 20, 2007 alleged corrective disclosure was "company-specific" news that "mattered to the market."²³³ Shapiro also offers an opinion that the alleged misstatements impacted Freddie Mac's stock price and were material.²³⁴ I comment on Shapiro later in this report in Section VIII.

162. Tabak also states that based on his review of "evidence in the record,"²³⁵ he "would be able to provide an opinion that loss causation existed."²³⁶ During his deposition Tabak clarified

²³¹ Class Cert Order, page 36.

²³² Tabak Report, ¶34. (underline added).

²³³ Tabak Report, ¶¶3, 35-36.

²³⁴ Shapiro Report, ¶3 ("Information I have learned since November 20, 2007, regarding those three topics with respect to Freddie Mac would have dramatically changed my analysis of Freddie Mac's financial health during the Relevant Period.... My reports for Fox-Pitt leading up to November 20, 2007, generally put Freddie Mac stock ratings at a positive 'outperform.' This would have changed to 'underperform' if prior to November 20, 2007, I had known Freddie Mac's true financial status with respect to credit risk, underwriting and economic capital during the Relevant Period.").

²³⁵ Tabak Report, ¶2-3.

²³⁶ Tabak Report, ¶32.

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that he is not opining that he “would be able to” opine on loss causation but he is in fact opining on loss causation. It is his opinion “that the alleged misrepresentations and omissions in this case caused plaintiffs' alleged losses” when Freddie Mac announced its Q3 2007 financial results on November 20, 2007.²³⁷

163. My review and analysis of Tabak’s opinions shows that Tabak has no basis for concluding materiality and loss causation. His opinions are based on insufficient facts, flawed and/or unsubstantiated assumptions, unreliably applied methodologies, and they ignore economic evidence.

164. Tabak’s materiality and loss causation opinions are based on two arguments. His first argument is that both Feinstein and I agree that Freddie Mac’s November 20, 2007 stock price decline is statistically significant which Tabak claims indicates “the [Freddie Mac] news that day mattered to the market.”²³⁸ And second, that an analysis done by another economic consulting firm Forensic Economics (for one of Plaintiff’s counsel’s legal filings) of stock price reactions following “fourteen disclosures of losses and/or write-downs by nine different companies” (“Plaintiff’s Appendix 1”) (or eight different companies in addition to Freddie Mac) shows Freddie Mac had a “disproportionately severe stock-price decline” on November 20, 2007 and this conclusion by Tabak purportedly demonstrates “that (unless there is another explanation) the market underestimated its exposure to subprime and nontraditional mortgages.”²³⁹ He concludes from this assessment that “there is evidence in the record that is relevant to an understanding of the effect of the alleged misrepresentations and omissions on the market’s valuation of Freddie Mac,”²⁴⁰ which appears to be an indirect way of stating an opinion on materiality. Tabak also

²³⁷ Tabak Deposition, at 53:8-18. (“Q. Is it your opinion that the alleged misrepresentations and omissions in this case caused plaintiffs' alleged losses? A. Well, again, I'm not discussing whether there are actual omissions or misrepresentations or simply allegations, but treating those allegations as true, they certainly at least contributed to the losses that plaintiff suffered in this case.”).

²³⁸ Tabak Report, ¶35.

²³⁹ Tabak Report, ¶¶ 21, 25, 28.

²⁴⁰ Tabak Report, ¶3.

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claims that if Plaintiffs prove their case at trial, linking the “unusually large stock-price decline on November 20, 2007 to the allegations,” this is “the final step in demonstrating loss causation from an economic perspective.”²⁴¹

165. Having concluded that the market price drop for Freddie Mac stock was significant on November 20, 2007, Tabak then concludes that this decline was not caused by any confounding information.

166. Tabak’s conclusion that there was no confounding information is a textbook example of an opinion that is based on insufficient facts. Tabak reached his conclusion that there was no confounding information other than the alleged fraud that was revealed on November 20, 2007 without even reviewing the mix of information received by the market leading up to and on November 20th, or reviewing what Freddie Mac officially announced on November 20, 2007.²⁴² Tabak simply declared that “[a]t this point, I have seen no additional “confounding” (i.e., unrelated to the allegations) information on that date that would require a disaggregation of the price reaction into a portion unrelated to the allegations.”²⁴³ He did not see any confounding information because it appears he did not even look.

167. Notably, Tabak’s made-for-litigation methodologies here differ from his approach to materiality and loss causation in other securities cases. In previous expert reports in other securities cases, Tabak employed careful statistical modeling and event study analysis which involves a detailed review of the mix of information released on and around alleged disclosure

²⁴¹ Tabak Report, ¶29.

²⁴² As discussed above, on November 20, 2007 Freddie Mac announced its Q3 2007 financial results which included an Earnings Release, an Information Supplement, Financial Statements and Core Tables, and an earnings slide presentation discuss on an Earnings Conference Call with analysts that day.

²⁴³ Tabak Report, ¶¶28, 30. In his deposition, he admitted that he did not even review Freddie Mac’s November 20, 2007 disclosure and he admitted that to “reach a final opinion on loss causation” he would have to “disaggregate out the confounding news from the allegation-related news.” Tabak Deposition, at 58:2-9, 66:8-12 and 203:10-15.

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dates (including potential confounding information),²⁴⁴ but he did not do so here. He testified that he was asked to perform essentially the same loss causation assignment in one of those matters as he was here and answer the same question as to whether the alleged misrepresentations and omissions caused losses to Plaintiffs but he did no such analysis in this matter.²⁴⁵

168. To reconcile his conclusion on loss causation with this Court's earlier finding that there was no "front-end" impact of the alleged disclosure defects, nor "back-end" corrective disclosure impact on November 20, 2007,²⁴⁶ Tabak does not point to any new and previously overlooked fact or analysis. Instead, he proffers a "simple example" of company losses on hidden "lottery tickets" ("Tabak Lottery Ticket Hypothetical") and claims an application of the Tabak Lottery Ticket Hypothetical to "this matter" helps "illustrate how [loss causation] works from an economic perspective."²⁴⁷

169. Tabak's opinions on loss causation and materiality are wrong and unsupported for at least the following reasons. First, although he is "agnostic" about market efficiency in this matter,²⁴⁸ his opinion about the November 20, 2007 market reaction to Freddie Mac's announcements depends on an unsubstantiated assumption of market efficiency which he himself said in his own published writing was required to use the event study methodology to quantify stock price reactions to new information, a method which in his deposition he testified he would also use in this matter to analyze loss causation and damages, as he has done in other matters.

170. Second, his analysis of the November 20, 2007 price reaction is incomplete and contradicted by a proper economic analysis of "evidence in the record" he has not reviewed.

²⁴⁴ See Expert Report of David I. Tabak, in *Sjunde AP-Fonden, et al. v. Gen. Elec. Co., et al.*, Case No. 17:-cv-8457 (S.D.N.Y.) ("To form my [loss causation] opinions, I have examined the six dates, or sets of dates, on which there was an alleged disclosure in the Complaint. The statistical analysis that I employ for this examination is the same that I am using in a report on market efficiency that I am submitting simultaneously in this matter. For each of these six dates or sets of dates, I identified (1) whether there was a statistically significant movement in GE's stock price; (2) what new information was provided to the market concerning GE; and (3) which new information caused the statistically significant stock price movement.")

²⁴⁵ Tabak Deposition, at 51:22-53:7.

²⁴⁶ Tabak Report, ¶1.

²⁴⁷ Tabak Report, ¶9.

²⁴⁸ Tabak Deposition, at 22:11-15.

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Surprisingly, Tabak did not read Freddie Mac's prior detailed disclosures on subprime and non-traditional mortgage exposure and Freddie Mac's actual November 20, 2007 disclosures, he should have reviewed for potential confounding information. Likewise, Tabak appears to have ignored Freddie Mac's post November 20, 2007 stock price recovery when it raised capital on November 30, 2007 alleviating market concerns about Freddie Mac's ability to grow its business after the losses announced on November 20. As I explained earlier in this report, a proper analysis of the full market reaction to the information disclosed by Freddie Mac on November 20, 2007, must also include three following trading days when the market learned about Freddie Mac's \$6 billion capital raise. This proper analysis shows that the stock price recovered and that the cumulative change in the stock price is not statistically significant after controlling for market and industry factors.

171. Third, Tabak's adoption of Plaintiff's Appendix 1, cannot support his opinions. It is a made-for-litigation method that is not reliable, based on insufficient facts, and applied in an unreliable manner. This is an analysis he did not perform in the first instance, but instead adopted from another consulting firm that assisted Plaintiffs with a legal brief. The analysis is replete with errors (Tabak claims to have corrected errors in the old analysis, but then made new errors) and is at bottom, irrelevant.

172. Fourth, the Tabak Lottery Ticket Hypothetical is misleading, based on a set of assumptions that are not applicable to the facts of this case, and proves nothing about loss causation here, as I explain below.

173. Overall, Tabak's opinions on materiality and loss causation are without merit, and he did nothing more than assume his conclusions.

B. Tabak's unstated dependence on market efficiency, which has not been established.

174. As noted above, this Court found that Plaintiff and their expert Feinstein had failed to

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establish market efficiency for Freddie Mac's common stock over the Relevant Period. Tabak does not say that he disagrees with the Court's finding that Plaintiff has not made a sufficient showing of market efficiency,²⁴⁹ does not defend the prior work offered by plaintiff's two prior experts on this issue, Mr. Hallman and Feinstein, does not offer any analysis of market efficiency, or even mention the word market efficiency in his expert report. When asked in his deposition about market efficiency, he testified that while he was "agnostic" on the issue; he did not need to establish efficiency to use an event study to analyze loss causation.²⁵⁰ Although, in an apparent contradiction, he later testified that market efficiency was required to determine the direction and "correct" amount of stock price reaction to new information in an event study, and that quantification of a disaggregation of the impact of potential confounding information on the stock price on corrective disclosure dates was needed to analyze loss causation.²⁵¹

175. Tabak's claim that he can use an event study to analyze loss causation without analyzing or establishing that Freddie Mac traded in an efficient market does not make logical sense. Despite claiming it is not required, Tabak implicitly assumes market efficiency for his loss causation opinion. It is true that one could mechanically conduct some statistical number crunching by estimating a market model regression and finding statistically significant excess returns on certain days when information is released, but that is not an event study unless the observed stock price movements can be said to have been caused by the event in question. The essential economic link of enabling the economist to attribute causation of the change in price to the "event," is the theory of semi-strong market efficiency (i.e., the stock market price at all times

²⁴⁹ Tabak said nothing in his report on this issue but did testify in his deposition that while he was not offering an opinion on whether the decision was "correct or incorrect," "there were some of the economic arguments in the market efficiency section [of the Class Cert Order] that I didn't think were quite on point. But you'd have to show it to me. It's been a while, especially in that area, in that section that I haven't reviewed probably in years." Tabak Deposition, pages 168:9-169:4.

²⁵⁰ Tabak Deposition, at 31:10-14 ("And can you use an event study in a situation where a market for a particular security is not efficient? A. Of course.") (objection omitted).

²⁵¹ Tabak Deposition, at 66:8-12 ("But I certainly agree with you at the end of the day one will have to disaggregate out the confounding news from the allegation-related news to reach a final opinion on loss causation.")

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reflects all material, publicly available information and therefore stock prices should react promptly to new material information regarding stock value).²⁵² If the market for the security is not semi-strong efficient at the time of the event, the causal link between the observed price change and material unexpected information is broken. As I understand it, this link is the basis for the Supreme Court's finding in *Basic* (upheld in *Halliburton II*) that market efficiency is required for Plaintiff to claim the rebuttable presumption of reliance based on fraud on the market theory. Even though reliance is not at issue in this case, the Supreme Court's logic is clear: Without the market being efficient, there is no link between the value of unexpected material information and any observed changes in stock price.

176. In addition, to perform the quantification of the disaggregation of confounding information Tabak claims is necessary to reach his "final opinion" on loss causation, an assumption of market efficiency is also required. If not, there is no economic basis to use an event study to quantify and assess the economic materiality of the impact of the different pieces of information which require disaggregation.

177. Furthermore, as I discuss later in this report, at this damages/merit stage Tabak needs to establish an even more rigorous standard of market efficiency ("fundamental" semi-strong form) beyond what Plaintiff already claimed was required, but failed to show, at the Class Certification Stage in order to use an event study to quantify damages.

C. Tabak's fundamentally flawed "analysis" of the alleged November 20, 2007 corrective disclosure.

178. Tabak's claim that "the large [November 20, 2007] decline in Freddie Mac's stock price indicates that (unless there is another explanation) the market underestimated its exposure to subprime and nontraditional mortgages" is based on a flawed interpretation of Freddie Mac's November 20 earnings announcement (which Tabak does not even "consider") and ignores

²⁵² See, e.g., 2017 Bajaj Class Certification Report, ¶26.

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economic evidence indicating “another explanation.”

1. Tabak did not even read, let alone consider, the actual disclosures at issue.

179. At the outset, Tabak’s entire opinion has no basis as Tabak does not even analyze the information released on November 20, 2007, nor does he even list Freddie Mac’s related disclosures in his “Documents Considered.” Leaving aside this fundamental shortcoming, Tabak’s “analysis” and discussion ignores the crucial economic context and market reaction to Freddie Mac’s November 20, 2007 earnings announcement as I have discussed in detail above in Section V. Following this alleged corrective disclosure, analysts did not ask Freddie Mac for further details on the subprime and nontraditional exposure that was allegedly previously concealed, but rather expressed concern about Freddie Mac’s need to raise capital to expand profitable business opportunities because of GAAP mark-to-market losses due in part to “[d]epressed market prices for illiquid assets”²⁵³ and larger than expected credit provisions “as a result of continued weakness in the housing market.”²⁵⁴ This lack of questions and commentary from analysts following November 20 is consistent with Freddie Mac’s extensive detailed disclosures (as also recognized by analysts) on the underlying mortgages in the single-family guarantee portfolio and the retained portfolio (as discussed in Section IV above).

2. Tabak did not “see” confounding information because he did not look for any.

180. In addition, Tabak’s claim that “[a]t this point, I have seen no additional “confounding” (i.e., unrelated to the allegations) information on that date that would require a disaggregation of the price reaction into a portion unrelated to the allegations”²⁵⁵ ignores

²⁵³ Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity As Well,” November 20, 2007.

²⁵⁴ Freddie Mac Q3 2007 Earnings Call; Freddie Mac Q3 2007 Press Release, page 1.

²⁵⁵ Tabak Report, ¶30.

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substantial confounding company specific information disclosed on November 20, 2007. Tabak's erroneous conclusion is not surprising as he has not even considered Freddie Mac's actual disclosures and admits he did not perform a detailed disaggregation of potentially confounding information, even though he has done so in numerous other matters when given the same assignment by counsel. He claims he read my deposition where I discussed potential confounding factors and quotes a portion of it in his report,²⁵⁶ but I never claimed at the Class Certification phase to provide an analysis of confounding factors of the kind of rigor required for loss causation and economic materiality analysis at the merits phase. I understand that it is Plaintiff's burden to provide this analysis, as Tabak acknowledged.²⁵⁷ He also testified in his deposition that he performed no statistical or quantitative analysis of confounding information but would need to do so to give a "final opinion" on loss causation, presumably at some later date.²⁵⁸

181. There are several pieces of potential confounding information that Tabak would have to disentangle to arrive at a proper loss causation conclusion and to determine whether the alleged disclosure defects that allegedly concealed some incremental part of Freddie Mac's exposure to subprime and Alt-A mortgages was economically material.

182. First, there is potentially material confounding non-allegation related information released on November 20, 2007. As I described above, of Freddie Mac's \$2 billion net quarterly losses (driven by \$5 billion of mark-to-market items and credit provisions), \$1.5 billion of this \$2 billion in net loss would not exist without loss from interest rate derivatives, which is clearly unrelated to Plaintiff's allegations. Freddie Mac's losses also stemmed from the realization of known risks about Freddie Mac's exposure to the rapidly deteriorating real estate and broader market conditions. As discussed above in detail in Sections IV and V, it was known to the market that Freddie Mac operated only in the secondary mortgage finance market and thus, by its very

²⁵⁶ Tabak Deposition, at 92:21-93:2.

²⁵⁷ Tabak Deposition, page 108.

²⁵⁸ Tabak Deposition, at 65:13-66:12.

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nature, was heavily exposed to the risks of the severe, unprecedented real estate and broader market downturn (“what may be the worst housing downturn since the Great Depression”)²⁵⁹ and ongoing financial crisis which was expected to deteriorate further as of November 20, 2007. These risks include the dramatic increase in market spreads, like the OAS Agency MBS spread which had a direct impact on the mark-to-market losses Freddie Mac was required by GAAP accounting rules to record, even if these marks did not represent ultimate expected realized losses on the underlying mortgage and MBS positions. This was recognized by analysts, as noted above, who observed that while “GAAP accounting resulted in market valuation adjustments on derivatives of \$1.4 billion and of about \$2.3 billion for credit,” “[d]epressed market prices for illiquid assets which in some instances aren't reflective of the Freddie Mac assets being valued are creating economic problems by reducing the capital available to support security purchases.”²⁶⁰

183. Second, Freddie Mac was also exposed to well-known and understood regulatory risk, which Tabak ignores. In particular, the OFHEO 30% capital requirement which, as discussed extensively above in Section V analysts, like Shapiro, worried would hamstring Freddie Mac’s ability to take advantage of the historic growth opportunities available to Freddie Mac in the then-current market environment. As Mr. Syron noted later in the Q4 2007 earnings call on February 28, 2008, access to capital was “absolutely crucial” and “on investors minds,” noting that “[n]o one could have lived through the last six months in the financial markets and missed the fact that access to capital is absolutely crucial in investor’s minds. Freddie Mac recognized our need to address capital in the fourth quarter of 2007 and took a positive affirmed step to issue \$6 billion in deferred stock. As it turned out, we were the first in a long parade of companies to do so.”²⁶¹

184. A third potential confounding factor is any losses caused by Freddie Mac’s large

²⁵⁹ Morgan Stanley, “Mortgage Finance: In the long term, pricing trumps losses, but the short-term could still be volatile,” October 26, 2007.

²⁶⁰ Bear Stearns, “GAAP Loss Reflects Reduced Market Liquidity and Is Restricting Liquidity as Well,” November 20, 2007.

²⁶¹ FRE – Q4 2007 Freddie Mac Earnings Conference Call, February 28, 2008, 1:00 PM ET, page 2.

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exposure to the numerous loans in its portfolio that are not at issue in this matter, which I understand are the “Accept” loans and not the “Caution” loans and which comprised the majority of the over \$1.6 trillion Single Family Guarantee Portfolio.²⁶² After all, Plaintiff’s allegations in this case focus on non-traditional “Caution” loans, but there appears to be no dispute that Freddie Mac’s portfolio included exposure over a trillion dollars of traditional loans. Tabak admitted that he did not know whether these “prime” loans, which are not at issue, contributed to the alleged corrective losses on November 20, 2007.²⁶³ He also admitted that this would represent confounding information if it led to “larger losses than the market would anticipate.”²⁶⁴ But that is exactly what happened beginning in 2007. The rapidly rising prime delinquency rates (see Okongwu Report Section 3) and severe home price declines (see Exhibits 1 and 2) in the second half of 2007 (with further declines expected in the future), as discussed above in Section IV and in the Okongwu Report, suggests that traditional loans could have accounted for some portion of the unexpected November 20, 2007 losses. This is also consistent with a 2010 Federal Reserve Bank of Chicago study which found that while the news media had “carried countless stories about soaring defaults among subprime mortgage borrowers,” default rates on prime loans, which account for 75% of the total outstanding mortgages in the U.S., had increased “rapidly,” especially for 2006 and 2007 vintages.²⁶⁵ The study noted that:

among prime loans made in 2005, 2.2 percent were 60 days or more overdue 12 months after the loan was made (our definition of default). For loans made in 2006, this percentage nearly doubled to 4.2 percent, and for loans made in 2007 it rose by another 20 percent, reaching 4.8 percent. By comparison, the percentage of subprime loans that had defaulted after 12 months was 14.6 percent for loans made in 2005, 20.5 percent for loans made in 2006, and 21.9 percent for loans made in 2007. To put these figures in perspective, only 1.4 percent of prime loans and less

²⁶² See Okongwu Report, Section 5.

²⁶³ Tabak Deposition, at 262:23-263:4.

²⁶⁴ Tabak Deposition, at 263:5-21.

²⁶⁵ Gene Amromin and Anna L. Paulson, “Default Rates on Prime and Subprime Mortgages: Differences & Similarities,” Federal Reserve Bank of Chicago, 2010, page 1.

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than 7 percent of subprime originated in 2002 defaulted within their first 12 months.

And that:

*the deterioration in the performance of prime loans happened more rapidly than it did for subprime loans. For example, the percentage of prime loans in default during their first 12 months grew by 95 percent between 2005 and 2006. Among subprime loans it grew by a relatively modest 53 percent.*²⁶⁶

185. Fourth, there are also several pieces of unexpected and potentially material information, even information pertaining to subprime and other nontraditional mortgages that was released November 20, 2007 that do not pertain to the materialization of allegedly concealed risks but instead to materialization of previously disclosed risks about Freddie's exposure to such loan products.

186. For example, Freddie Mac had disclosed its non-agency subprime RMBS holdings in its retained portfolio of \$120 billion, which Plaintiff does not dispute. While the market learned on November 20, 2007 that Freddie Mac did not report accounting losses on these positions, as such unrealized losses are not required under GAAP to be recognized on financial statements, analysts expressed concern that these positions might generate future realized losses, consistent with Freddie Mac's warning on November 20, 2007 that it expected to report even further losses in the coming quarter and year, given the trajectory of the market downturn.²⁶⁷ Such concerns may also have contributed to some of the price drop Freddie Mac's stock experienced on that day. Credit Suisse, for example noted on November 21, 2007 that "While the company indicated its non-agency AAA subprime portfolio should not be subject to impairment, we believe that if the

²⁶⁶ Gene Amromin and Anna L. Paulson, "Default Rates on Prime and Subprime Mortgages: Differences & Similarities," Federal Reserve Bank of Chicago, 2010, page 1.

²⁶⁷ See, e.g., Freddie Mac Q3 2007 Earnings Call, page 2. ("As you know, the third quarter continued to represent a very difficult environment as falling housing prices, deteriorating mortgage credit, continued volatility in the fixed income market all contributed to a net loss of \$2 billion. Given the continuation of the same market trends that produced these results through October and November, it is likely that the fourth quarter will prove difficult as well. These results are not surprising, given the vagaries of our accounting that were tied to the housing accounting -- to the housing economy and we are taking strong steps to improve our business and our future financial results.")

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recent credit spread widening does not reverse over the coming quarters, we believe that Freddie could recognize an other than temporary impairment of between \$1-5 billion (for a 1-10% price move in the securities) in 2008.”²⁶⁸

187. In the Single Family Guarantee Portfolio, as I discussed above, prior to November 20, 2007 Freddie Mac had also disclosed its \$120 billion Alt-A exposure, its \$16 billion “nontraditional” Interest Only loan exposure, its \$1 billion “nontraditional” Option ARM exposure, and its \$63 billion and \$203 billion FICO < 620 and FICO < 660 loan exposure (respectively).²⁶⁹ All of these disclosed positions could have contributed substantially to an unexpectedly large loss announced on that day, and any such losses would not represent the materialization of concealed risks, but materialization of previously disclosed risks. Freddie Mac also reported on November 20 as an update on the “current market environment and its impact on our G fee business,” that:

*our 2006 and 2007 books are expected to realize higher expected default costs than prior books for two reasons. First, the recent weakening in the house price -- of house prices have increased expected default costs for the 2006 and 2007 books compared to prior years. Second, there was an increase with risk layering mortgages. For example, mortgages with FICO scores less than 620 and original LTVs greater than 90, are more concentrated in the 2007 book and represent about 1% of purchases.*²⁷⁰

188. Despite admitting in his deposition that Fannie Mae was the most similar company to Freddie Mac in “terms of business,”²⁷¹ Tabak also did not even consider Fannie Mae’s stock price reaction to Freddie Mac’s announcements on November 20, 2007, a day when Fannie Mae did not announce any material unexpected news. The 25% price decline that Fannie Mae experienced on the day that Freddie Mac made its earnings announcement demonstrates that most of the price drop

²⁶⁸ Credit Suisse, “Hostile Environment Weighs on Q3 Results; Sizable Capital Raise Needed,” November 21, 2007.

²⁶⁹ See Section IV above.

²⁷⁰ Freddie Mac Q3 2007 Earnings Call, page 3.

²⁷¹ Tabak Deposition, at 227:7-11.

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in Freddie Mac's stock price on November 20th was unrelated to anything specific to Freddie Mac that did not equally apply to Fannie Mae. Of course, as I have discussed above, most of Freddie Mac's stock price drop on November 20th was reversed on November 27, 28, and 30, 2007 as Freddie Mac successfully raised capital needed to offset the effect of OFHEO not granting capital relief. Such regulatory capital concerns would equally apply to Fannie Mae and have nothing to do with the alleged fraud.²⁷² Thus, in any reasoned analysis of the 29% stock price drop on Freddie's stock on November 20, 2007, one would consider Fannie Mae's stock price drop of 25% due to regulatory capital concerns.

189. In sum, Tabak's opinions are based on insufficient information because, among other things, he did not review a record replete with confounding information. He found no confounding information for one simple reason: he did not look.

3. Tabak ignores the price impact of Freddie Mac capital raise on November 30 and its obvious implications for the stock price decline on November 20.

190. Tabak also opines that, although in his review of the record he found nothing to change "the conclusion that the materialization of the [undisclosed] risk accounted for the bulk of Freddie Mac's November 20, 2007 stock-price decline,"²⁷³ he said he is "open to the possibility," that there are "other factors to consider."²⁷⁴ As I demonstrated above in Section V he ignores economic evidence in the record indicating an obvious candidate for "another explanation." Namely, concern over Freddie's need to raise substantial capital in a difficult market environment and unprecedented credit turmoil, a concern that was alleviated by November 30. Tabak does

²⁷² I did not find any Fannie Mae specific news that could explain Fannie Mae's stock price drop. One news article reported the downgrade by Plaintiff's expert: "Fox-Pitt analyst Howard Shapiro downgraded both Freddie Mac and Fannie Mae to underperform from outperform, saying the companies will have trouble exploiting opportunities to expand." *Dow Jones International News*, "With Capital Warning, Freddie Shifts From Solution To Problem," November 20, 2007.

²⁷³ Tabak Report, ¶¶28, 30.

²⁷⁴ Tabak Report, ¶28.

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mention Freddie Mac's need to raise capital following the November 20, 2007 announcement but concludes this is not an independent reason for the price decline.²⁷⁵

191. Tabak's speculation that Freddie Mac's stock price drop due to capital concerns is not a confounding factor because losses that generated the need for the capital raise stemmed from losses due to undisclosed risks makes no economic sense. Freddie Mac's regulatory capital is impaired by losses and its future capital needs regardless of whether these losses were created by materialization of previously disclosed or undisclosed risks. We know from the discussion above that reasons having nothing to do with alleged undisclosed risks caused losses on November 20th and Tabak has not provided any evidence that any of the losses announced on November 20th came from previously undisclosed risks. Moreover, Tabak ignores Freddie Mac's stock recovery by November 30, 2007 as Freddie Mac calmed market concerns over its ability to raise capital on favorable terms amidst market turmoil and a worsening financial crisis. This price recovery after the capital raise must be netted out before one can measure the stock price drop related to losses, for whatever other reasons. Once we do so, there is no statistically significant stock price decline to explain.

192. As I demonstrated above in Section V, illustrated by the response of Freddie Mac's stock price, CDS spreads, and stock option implied volatility (*see* Figures 7A, 7B, 8, and 9) and confirmed by market commentary, Freddie Mac's successful capital raise alleviated market concerns heightened on November 20, 2007 about its ability to raise preferred capital during the severe market turmoil on favorable pricing terms and non-convertible, non-dilutive to common shareholders.

193. My prior opinion that based on "an analysis of the economic evidence surrounding the November 20, 2007 disclosures," "there was no evidence to suggest that the Company's

²⁷⁵ See Tabak Report, page 10, footnote 13 ("The closest example of a factor specific to Freddie Mac that Dr. Bajaj cites would be its potential need to raise capital. However, that need to raise capital was a result of Freddie Mac's losses due to the other factors cited, and thus might help explain the magnitude of the stock-price decline but would not be an independent reason for that decline.").

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disclosures were linked to the alleged misrepresentations and omissions in the Third Amended Complaint” is therefore supported by economic evidence Tabak ignores.

D. The two arguments Tabak offers in purported support of his materiality and loss causation opinions are flawed, and his opinion is unsupported and incorrect.

1. Tabak mischaracterizes my prior testimony.

194. As noted above, Tabak’s opinions on materiality and loss causation are based primarily on two arguments. First, he concludes that because both Feinstein and I concluded that Freddie Mac’s stock price decline on November 20, 2007 was statistically significant, the alleged misstatement was material to investors. This conclusion mischaracterizes my expert reports and my deposition testimony.

195. In my response to the Feinstein report, I did not provide any event study. What I had concluded was that the large price drop on November 20, 2007 does not by itself establish market efficiency even if it was statistically significant, contrary to Feinstein’s claim. I also concluded, and the Court agreed, that there was no price impact because the information in the alleged corrective disclosure and “how that announcement was perceived by the market,” did not correspond to the alleged disclosure defects. All Feinstein and I agreed on was the obvious: the price drop on November 20th was large and thus statistically significant. In no way does this imply that I agreed with Feinstein that the price drop on November 20 established that any allegedly undisclosed information was material. In fact, I demonstrated, and the Court agreed, that the price drop on November 20, 2007, was not related to the correction of any prior alleged misrepresentations. My analysis in Section V above establishes that the economic evidence contradicts Plaintiff’s allegation that market’s reaction to Freddie Mac’s announcement on November 20 establishes there were material prior disclosure defects.

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2. Tabak also fails to establish the materiality of alleged misrepresentations and omissions based on “Plaintiff’s Appendix 1.”

196. The second of two arguments Tabak offers in purported support of his opinion on materiality and loss causation is based on his incorrect and flawed reliance on Appendix 1 to Lead Plaintiff’s Memorandum in Opposition to Defendants’ Motion to Dismiss the First Amended Complaint dated October 16, 2008 (“Plaintiff’s Appendix 1”).²⁷⁶ Tabak adopted this series of “very simplified event studies”²⁷⁷ performed by another economic consulting firm that assisted Plaintiffs for a legal brief. This analysis was not presented by either of Plaintiff’s two prior experts Hallman or Feinstein. This analysis is a made-for-litigation approach, which is based on insufficient information, and replete with basic factual and data errors. Tabak claims to have corrected errors in the old analysis, but then made new errors, and he did nothing to address how meaningless this purported analysis is.

197. As an initial matter, I note that this analysis is a made-for-litigation approach that is not commonly used in securities cases. I have never seen such an approach used before in an effort to establish materiality or loss causation. During his deposition, Tabak could not recall any case (of the over hundred securities cases he has worked on) where he implemented such an “analysis” to purportedly isolate and analyze the materiality of company-specific corrective information.²⁷⁸

198. According to Tabak, Plaintiff’s Appendix 1 “examines the stock-price movements” on fourteen disclosures of “massive losses” and/or write-downs caused by “the precipitous decline in house prices and the tight credit market”²⁷⁹ (“14 Purported Comparable Disclosures” and “14 Purported Comparable Disclosure Dates”) and “[i]t finds that the average one-day stock-price

²⁷⁶ Tabak Report, ¶22. *See also* Tabak Deposition, at 264:2-265:6.

²⁷⁷ Tabak Deposition, at 162:2-14.

²⁷⁸ Tabak Deposition, at 277:7-278:5. Tabak has also not published an article on this approach. Tabak Deposition, at 278:13-19.

²⁷⁹ Tabak Report, ¶21 (quoting Memorandum of Law in Support of Defendants’ Motion to Dismiss the Amended Complaint with Prejudice, dated September 2, 2008, page 9).

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change is 0.85% looking at all fourteen disclosures and -1.09% if one positive outlier is excluded.”²⁸⁰ Purportedly relying on “event study literature” that “looks at what happens when there are similar announcements by different companies at different points in time,”²⁸¹ Tabak compares Freddie Mac’s stock price change on November 20, 2007 to the average one-day stock price change on the days of the 14 Purported Comparable Disclosures and claims that because “Freddie Mac’s stock-price decline was over three times as large as that of the next-largest decline,” “[t]he market was reacting to something that distinguished Freddie Mac from the other companies” and “[t]his demonstrates that the news that mattered to the market [released by Freddie Mac] was company-specific.”²⁸² In his deposition, he further clarified, that although it was not in his expert report, it was his opinion, as confirmed by his electronic workpapers, that Freddie Mac’s stock price reaction to the alleged corrective disclosure was “statistically significant compared to the other price movements [he] examined” and a “statistically significant outlier” shown by his “t-statistic.”²⁸³ Tabak concludes that “the record evidence would allow for economic opinions on the relevance and importance of the alleged misrepresentations and omissions that would allow a trier of fact to conclude that those alleged misrepresentations and omissions were material.”²⁸⁴ Tabak also claims that if Plaintiffs prove their case at trial, linking the “unusually large stock-price decline on November 20, 2007 to the allegations,” this is “the final step in demonstrating loss causation from an economic perspective.”²⁸⁵

199. Even before discussing the various errors and fundamental flaws with Tabak’s claims about Plaintiff’s Appendix 1, on its face the analysis makes no economic sense. That is because

²⁸⁰ Tabak Report, ¶¶21-22.

²⁸¹ Tabak Deposition, pages 278:20-279:11.

²⁸² Tabak Report, ¶¶24, 36.

²⁸³ Tabak Deposition, at 121:9-123:17 and 210:15-211:10. *See also* Tabak Report Production, “Appendix 1 Replication.xls,” worksheet Tab “Plaintiff Exhibit,” cells “X:40” and “AF:40” showing the “t-statistic” of Freddie Mac’s unadjusted (-13.83) and “Excess” returns (-15.32) compared to the “Average of Companies, excluding Freddie Mac.”

²⁸⁴ Tabak Report, ¶34.

²⁸⁵ Tabak Report, ¶29.

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the analysis suggests that massive losses at other companies led to positive, not negative, stock price reactions for the securities of those companies. More specifically, the analysis purportedly examines stock price reactions following various company announcements of “massive losses” and write-downs ranging from \$247 million to \$18.1 billion.²⁸⁶ In the version of Plaintiff’s Appendix 1 Tabak claims he corrected,²⁸⁷ the analysis of the 14 Purported Comparable Disclosure Dates shows overall average **positive** returns (excluding Freddie Mac) on the “Day of Disclosure” **of 2.14%, and 0.10%** (also excluding the AMBAC date, which he erroneously calls a “positive outlier”²⁸⁸).

200. This computation, taken at face value suggests that investors did not react **negatively** to news of “massive” write-downs and losses of up to \$18.1 billion.²⁸⁹ Even ignoring the fact that this result is driven by basic factual and computational errors, how would a finding that says that massive losses and write-downs by financial firms during the financial crisis did not result in significant stock price drops support the Plaintiff’s claim that Freddie Mac’s announcement of losses on November 20th somehow were driven by material undisclosed risks? Regardless, the anomalous results of this “analysis” should have led Tabak to inquire further.

201. As I show below, there are numerous basic errors in Tabak’s analysis and the

²⁸⁶ See Plaintiff’s Appendix 1 to Memorandum in Opposition to Defendants’ Motion to Dismiss the First Amended Complaint, Oct. 16, 2008 (columns titled “LOSS” and “WRITEDOWN”).

²⁸⁷ Tabak Report, page 8, footnote 9. (“While I rely on information in the record for my analyses in this report, I have found some potential errors in the analysis. Redoing the analysis with alternative data does not qualitatively affect the analyses presented here and, in fact, results in a larger gap between Freddie Mac’s one-day raw price movement and the most negative raw price movement related to the other fourteen announcements.”). I received Tabak’s supporting datafiles and I understand the Excel file “Appendix 1 Replication.xlsx,” worksheet Tabs “Plaintiff Exhibit” and “Plaintiff Exhibit (Priors)” represent Tabak’s purported correction of Plaintiff’s original analysis.

²⁸⁸ Tabak Report, ¶22. (emphasis added). I note below that this claim is erroneous as Tabak included AMBAC’s January 22, 2008 announcement of a \$3.2 billion quarterly net income loss as one of the 14 Purported Comparable Disclosure Dates when AMBAC’s price increased 28.6% but ignored AMBAC’s disclosure from six days earlier (January 16, 2008) when AMBAC warned it would report loss for the same quarter of \$3.5 billion and AMBAC’s price fell 39%.

²⁸⁹ Even the average “excess” returns in Tabak’s purportedly corrected Plaintiff’s Appendix 1 are overall positive, 2.49% excluding Freddie Mac, and 0.66% excluding Freddie Mac and AMBAC. See Tabak Report Production, “Appendix 1 Replication.xlsx,” worksheet Tabs “Plaintiff Exhibit” and “Plaintiff Exhibit (Priors).”

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purported similar events are not similar in any way so Tabak cannot draw any conclusions from his comparison of Freddie Mac's November 20 price decline with these 14 announcements.

a. Correcting only two of Tabak's errors undermines his conclusion

202. As I explain below, correcting only two of Tabak's errors in his adoption of Plaintiff's Appendix 1 invalidates his conclusion.

203. First, while purportedly making corrections to Plaintiff's original Appendix 1, Tabak made new errors that severely bias his results. Tabak claims that "[w]hile I rely on information in the record for my analyses in this report, I have found some potential errors in the analysis. Redoing the analysis with alternative data does not qualitatively affect the analyses presented here and, in fact, results in a **larger** gap between Freddie Mac's one-day raw price movement and the most negative raw price movement related to the other fourteen announcements."²⁹⁰ But whatever errors Tabak found and fixed, he made new serious errors in the numbers that he purportedly corrected.

204. According to Plaintiff's original Appendix 1, Washington Mutual had a disclosure related to a write-down of \$1.6 billion on December 10, 2007 and its stock price declined 2% on that day. My examination of Plaintiff's Appendix 1 and the economic evidence shows this was both an incorrect announcement date and an incorrect stock price change.

205. After trading hours on December 10, 2007, Washington Mutual issued a press release announcing a "series of actions designed to address the unprecedented challenges in the mortgage and credit markets by strengthening the company's capital and liquidity."²⁹¹ Since the press release was published after trading hours on December 10, 2007, the correct date to analyze the

²⁹⁰ Tabak Report, page 8, footnote 9. (underline added)

²⁹¹ *Business Wire*, "WaMu to Raise \$2.5 Billion in Additional Capital, Reduce Dividend, Resize Home Loans Business and Cut Expenses to Fortify Capital Base; * Expects Net Loss for Fourth Quarter 2007 With Non-cash Writedown of Home Loans Segment Goodwill * Non-cash Writedown Will Not Affect Key Capital Ratios or Liquidity," December 10, 2007, 16:04.

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stock price reaction to the information released by Washington Mutual is December 11, 2007. Tabak agrees. He changed the “disclosure day” event to December 11, 2007 in his purported corrected analysis.²⁹²

206. Washington Mutual’s share price declined 12.4% on December 11,²⁹³ but Plaintiff’s original Appendix 1 shows a decline of 6.6% on December 11, 2007. Tabak also appears to agree that the price change was incorrect, however, in his purportedly corrected version of Appendix 1, he introduced an additional error claiming Washington Mutual’s price increased by 2.9%, instead of a decline of 12.4%. (I refer to this error hereafter as the “Tabak WaMu Price Error”)²⁹⁴

207. Tabak also makes another fundamental error in analyzing Washington Mutual’s December 11, 2007 disclosure and comparing it to Freddie Mac. The purpose of Tabak’s adoption of Plaintiff’s Appendix 1 was also to compare “**similar announcements**” to Freddie Mac’s November 20, 2007 alleged corrective disclosure. On December 10 (after hours), Washington Mutual, like Freddie Mac on November 20, 2007, announced quarterly losses and that “to address the unprecedented challenges in the mortgage and credit markets” it was issuing preferred shares and cutting its dividend. However, Tabak ignored that when Washington Mutual announced that it raised and priced \$2.9 billion in preferred shares, the stock price declined another 7.8%.²⁹⁵ Thus, taking full account of Washington Mutual’s stock price decline over the two dates of inter-related announcements about financial losses and raising capital, the stock price declined by approximately 19% [= (1.19 x 1.078) - 1].

208. A more appropriate comparison to Freddie Mac would have been to acknowledge this

²⁹² See Tabak Report Production, “Appendix 1 Replication.xlsx,” worksheet Tabs “Plaintiff Exhibit” and “Plaintiff Exhibit (Priors)”.

²⁹³ Stock prices from CRSP. Plaintiffs’ Appendix 1 shows the incorrect price of \$18.65 for December 10, 2007. See also, *The News Tribune*, “Washington Mutual Stock Price Sinks 12.4 Percent on Bad News,” December 12, 2007.

²⁹⁴ Tabak’s replication incorrectly shows that Washington Mutual’s stock price increased from \$18.59 on December 10, 2007 to \$19.13 on December 11, 2007. See Tabak Report Production, Appendix 1 Replication.xls, tab “Plaintiff Exhibit,” row 20.

²⁹⁵ *Reuters News*, “UPDATE 2- WaMu Prices \$2.9 Bln of Convertible Shrs,” December 12, 2007.

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two-day 19% decline and compare it to Freddie Mac's price reaction on November 20, 27, 28, and 30, 2007, as discussed above in Section V which included Freddie Mac's quarterly losses, dividend cut and raising/pricing of \$6 billion in preferred shares. Over this period Freddie Mac's price declined by only 0.75%²⁹⁶ compared to Washington Mutual's decline of 19%. Similarly, my analysis discussed above in Section V.E and Appendix 4, shows that Freddie Mac's "excess" return, i.e., the return after controlling for market-wide and other factors, over this period was -2.8%, while Plaintiff's Appendix 1 shows Washington Mutual's excess return (after correcting the Washington Mutual error's, both the old and the new Tabak errors) was -13.8%.²⁹⁷ Clearly, comparing Freddie Mac to Washington Mutual provides no basis to conclude that Freddie Mac's price reaction was material, as Tabak incorrectly argues.

209. Second, in addition to making new errors and improper comparisons, Tabak failed to correct other serious errors in the old analysis. According to Plaintiff's Appendix 1 and Tabak's "corrected" version, AMBAC Financial made a disclosure related to a loss of \$3.3 billion on January 22, 2008 and its stock price **increased** 28.6%. Tabak included this increase, though he recognized it as an outlier. But this computation is nonsensical because it ignores AMBAC's related disclosure from six days earlier (January 16, 2008) when AMBAC warned it would report a loss for the same quarter of \$3.5 billion and AMBAC's **price fell 39%**.²⁹⁸ The next day, AMBAC's **price fell another 52%** when Moody's Investors Service put the company on review for a possible downgrade.²⁹⁹ Thus if Tabak had included the effect of these announcements in their entirety, they would show a total decline of about 62% ("Tabak AMBAC Event Error").³⁰⁰

²⁹⁶ See Figure 7B. Freddie Mac's market capitalization declined by \$7.118 billion on November 20 and increased by \$6.933 billion on November 27, 28, and 30, 2007, a decline of \$0.185 billion. This \$0.185 billion decline across the four dates represents a 0.75% decline from Freddie Mac's market capitalization of \$24.808 billion as of market close on November 19, 2007.

²⁹⁷ My corrections to Tabak's purportedly corrected Plaintiff's Appendix 1 are included with this report as electronic work files.

²⁹⁸ *Dow Jones News Service*, "UPDATE: Ambac to Raise \$1B In Capital, Sees Big 4Q Losses," January 16, 2008.

²⁹⁹ *Dow Jones News Service*, "AMBAC Comments on Recent Moody's Report," January 17, 2008.

³⁰⁰ $-0.62 = [(1 - 0.39) * (1 - 0.52) * (1 + 0.286)] - 1$

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210. Tabak's claim that because "Freddie Mac's stock-price decline was over three times as large as that of the next-largest decline," "[t]he market was reacting to something that distinguished Freddie Mac from the other companies" and "[t]his demonstrates that the news that mattered to the market [released by Freddie Mac] was company-specific"³⁰¹ has no basis because "Freddie Mac's stock-price decline was" clearly not "over three times as large as that of the next-largest decline." Moreover, using the correct Freddie Mac reaction period to the alleged corrective information, i.e., on November 20, 27, 28, and 30, 2007, shows that Freddie Mac's price reaction of -0.75% was not even as "large" as the corrected "Average of Companies, excluding Freddie Mac" of -2.5% in Tabak's adoption of Plaintiff's Appendix 1 (correcting the Tabak WaMu Price Error and the Tabak AMBAC Event Error in addition to other price and return data errors), let alone "over three times as large."³⁰²

b. Plaintiff's Appendix 1 is not a properly conducted "event study" because the event selection makes no sense.

211. In adopting Plaintiff's Appendix 1, Tabak claims to rely on "event study literature" that "looks at what happens when there are similar announcements by different companies at different points in time."³⁰³ Tabak has not explained why these companies or their announcements are in any way comparable to the alleged disclosures by Freddie Mac on November 20, 2007.³⁰⁴

212. Thus, Tabak compares the stock price reaction on the 14 Purported Comparable Disclosures to Freddie Mac's November 20, 2007 alleged corrective disclosure, but he has not determined why these 14 Purported Comparable Disclosures are at all comparable (beyond superficially and misleadingly claiming in his deposition that Defendants selected these dates as comparable in a legal brief, which is not true as Defendants simply used the announcements to

³⁰¹ Tabak Report, ¶¶24, 36.

³⁰² See Exhibit 6.

³⁰³ Tabak Deposition, at 278:20-279:11.

³⁰⁴ In deposition testimony, Tabak acknowledges that the company announcements were selected by Defendants' counsel and that the purpose of this analysis was not an event study as implemented by Plaintiff and adopted by Tabak. Tabak Deposition, at 229:18-22.

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argue that other financial firms were announcing real estate market and financial crisis related losses in the second half of 2007, which is of course true.)

213. Nevertheless, Tabak argues that “No matter what adjustments are made for market movements, Freddie Mac’s stock-price decline will be an outlier compared to the other stock-price movements. For example, the most negative of the other first-day stock-price movements listed in Plaintiff’s Appendix 1 was -8.53%. Freddie Mac’s decline of 28.69% was thus over three times as large as that of the most negative of the other stock-price movements, which would make it a statistically significant outlier.”³⁰⁵ Of course, his computation of returns and selection of event dates was incorrect in crucial instances and this comparison is therefore incorrect.

214. In his deposition, Tabak confirmed that he did not do any analysis to compare the eight companies to Freddie Mac.³⁰⁶ One indication that the eight companies may not be comparable to one another or to Freddie Mac is that Appendix 1 presents “excess returns” using three different industry indices.³⁰⁷ In addition, Tabak confirmed that only one company, Ambac, invested solely in the mortgage markets like Freddie Mac and that the others had “broader portfolio and activities.”³⁰⁸ These other diversified companies would not be as adversely affected by an unprecedented downturn in the overall mortgage finance industry as compared to Freddie Mac, a monoline company invested only in the secondary mortgage market. Though he did not do an analysis comparing the companies to Freddie Mac, he admitted that this comparability analysis is “certainly something you would want to consider if you were actually doing this for purposes of quantifying the difference.”³⁰⁹ But that is exactly what he did here when he compared the average price change on this sample of announcements to Freddie Mac’s stock price change, “quantifying the difference” to analyze statistical significance.

³⁰⁵ Tabak Report, ¶23.

³⁰⁶ Tabak Deposition, at 229:9-12.

³⁰⁷ See Plaintiff’s Appendix 1, column “Industry Index Used.” The Industry Index Used is described as a “representative industry index.”

³⁰⁸ Tabak Deposition, at 231:15-232:3.

³⁰⁹ Tabak Deposition, at 232:4-18.

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215. Tabak's flawed event selection methodology is also evidenced by the fact that he also simply ignored the drop in stock price of Fannie Mae, Freddie Mac's "principal competitor,"³¹⁰ which he agreed is "the most similar to Freddie Mac in terms of its business,"³¹¹ on the very same day, November 20, 2007.³¹² Fannie Mae's stock price fell 24.8% on November 20, 2007, even though Fannie Mae did not make any unexpected material announcement on that day.³¹³ It is not clear to me how Tabak can conclude "that the news that mattered to the market was company-specific," when the price of Freddie Mac's principal competitor also declined specifically on the same day.

216. Given that both companies, Freddie Mac and Fannie Mae are GSEs, regulatory pressures affects both companies to the same degree. The fact that the Fannie Mae stock price dropped on November 20, 2007 suggests that at least part of the Freddie Mac stock price drop was to regulatory and other issues that were endemic to the GSE business model.

c. Plaintiff's Appendix 1 is not a properly conducted "event study" because the events were not properly analyzed, or even analyzed at all.

217. In addition to a flawed comparable company and event selection methodology, Tabak's analysis (or lack thereof) of the information released on the "events" is incomplete and wrong. A fundamental part of an event study is to analyze the information released to determine whether it is new, value-relevant information on each date and whether there is other information that could have impacted the stock price on each date. Tabak admits that he has done no such

³¹⁰ Freddie Mac considers Fannie Mae as one of its principal competitors. In its 2006 Annual Report, Freddie Mac states that "[o]ur principal competitors are the Federal National Mortgage Association, or Fannie Mae, a similarly chartered government-sponsored enterprise, or GSE, the Federal Home Loan Banks and other financial institutions that retain or securitize mortgages, such as commercial and investment banks, dealers and thrift institutions." And as "a result, we mainly compete for funds in the debt issuance markets with Fannie Mae and the Federal Home Loan Banks, which issue debt securities of comparable quality and ratings." Freddie Mac, 2006 Annual Report, pages 3-4.

³¹¹ Tabak Deposition, at 227:7-11.

³¹² Tabak Deposition, at 227:7-15.

³¹³ Stock prices from CRSP.

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analysis of the 14 Purported Comparable Disclosure Dates and thus cannot make any inferences about the stock price change on any of the dates. In his deposition testimony, Tabak confirmed that he did not look at all the news for each company and that he does not know if there was confounding information.³¹⁴

218. One example of how this flawed event information analysis skews the results of his analysis is the example of AMBAC discussed above. Proper identification of the earlier loss announcement event would have identified a 39% decline, not a 28.6% increase as is claimed in Plaintiff's Appendix 1 (and Tabak's purported correction of Plaintiff's Appendix 1). Another example is the selection of CIBC's January 14, 2008 announcement when CIBC's stock price declined 2.14%. This ignores CIBC's earlier disclosure on December 6, 2007 when CIBC disclosed for the first time its \$9.3 billion in subprime-RMBS backed CDO exposure hedged with monoline insurers and announced additional RMBS/CDO related losses for its unhedged portfolio.³¹⁵ CIBC's stock price declined 5.63% on December 6, 2007 which Tabak ignored.

d. Tabak claims Plaintiff's Appendix 1 shows the Freddie Mac "news that mattered to the market [on November 20, 2007] was company-specific," but did not even examine the "news."

219. Tabak states that "the analysis of the stock-price changes for Freddie Mac and the other fourteen disclosures by other financial institutions," "demonstrates that the ultimate result of the alleged misrepresentations and omissions were economically meaningful when disclosed" and "that the news that mattered to the market was company-specific."³¹⁶

220. But, Tabak could not have established that the "news that mattered to the market [on November 20, 2007] was company-specific" for an obviously simple reason that, as I have discussed above, Tabak admitted that he did not even review, let alone analyze the disclosure made

³¹⁴ Tabak Deposition, at 228:6-21.

³¹⁵ See Canadian Imperial Bank of Commerce, Form 6-K, December 6, 2007.

³¹⁶ Tabak Report, ¶36.

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by Freddie Mac on November 20, 2007. In his deposition, Tabak confirms that he had not seen Freddie Mac's Information Statement Supplement dated November 20, 2007 before his deposition and that he did not rely on the disclosure for any of his opinions.³¹⁷ In his deposition, Tabak also confirmed that he had not seen Freddie Mac's press release dated November 20, 2007 nor the presentation with financial results also dated November 20, 2007.³¹⁸

221. In short, contrary to Tabak's claims, his adoption and interpretation of Plaintiff's Appendix 1 proves nothing about the materiality of Freddie Mac's November 20, 2007 alleged corrective disclosures or loss causation.

E. The Tabak Lottery Ticket Hypothetical is misplaced and proves nothing.

222. The TAC alleges that the November 20, 2007 declines are "directly attributable to the market's reaction to revelations of the nature, extent and impact of the fraud at Freddie Mac."³¹⁹ This Court, based in part on my earlier testimony concluded "the alleged misstatements ... did not impact Freddie Mac's stock price."³²⁰ Tabak has not offered any economic evidence to claim that the Court's conclusion was incorrect. However, he proffers an "oversimplification"³²¹ of a story about a company's losses on hidden "lottery tickets" and then claims an application of this hypothetical example to "this matter" helps "illustrate how [loss causation] works from an economic perspective."³²² It does not.

223. The Tabak Lottery Ticket Hypothetical assumes that a company "spends its entire cash holdings on lottery tickets, holds onto those lottery tickets for several quarters, and then all of the tickets come up losers [and] that as part of its next earnings announcement after the lottery tickets are revealed to be losers, the company announces unexpectedly poor earnings that it

³¹⁷ Tabak Deposition, at 203:4-24.

³¹⁸ Tabak Deposition, at 201:24-202:10 and 204:13-205:7.

³¹⁹ TAC, ¶271.

³²⁰ Class Certification Opinion, page 36.

³²¹ Tabak Deposition, at 180:10-13.

³²² Tabak Report, ¶9.

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attributes to higher-than-expected costs but does not disclose that those costs were due to the purchase of lottery tickets.”³²³ Tabak assumes that somehow the market reacted to corrective disclosures alleged by the Plaintiff even without knowing what was corrective on that day and assumes the market ultimately learned of the truth years later, by which time the market realized that its reaction to the hidden truth years earlier, while uniformed, was somehow correct and no further price reaction was therefore observed then.³²⁴ As I discuss below, his example is misleading and does not apply to the facts of this case.

224. There are three main flaws with Tabak’s “lottery ticket” hypothetical.

225. First, the Tabak Lottery Ticket Hypothetical assumes that “a company secretly spends its entire cash holdings on lottery tickets.”³²⁵ Thus, the hypothetical example assumes that a company replaces a risk-less or risk-free asset (an asset with virtually no uncertainty in value) like cash with a risky asset like lottery tickets (an asset with uncertainty in value). However, as I understand the allegations in this case, Plaintiff alleges that Freddie Mac held more “subprime” mortgages than mortgages with other characteristics. All mortgages are assets that are accompanied by credit risk. As a result, comparing the purchase of one mortgage versus a mortgage with credit characteristics indicating more risk cannot be fairly analogized to purchasing risk-free cash versus lottery tickets. For this reason, Tabak readily admitted at his deposition that his hypothetical was an “oversimplification.”³²⁶

226. The hypothetical example also assumes that “When the lottery tickets turned out to be losers, the risk materialized. Then, when the company disclosed that realization, in the form of lower earnings, its stock price fell.”³²⁷ Since all types of mortgages are considered assets accompanied by risk, with values that are uncertain in the future, an announcement of lower

³²³ Tabak Report, ¶10.

³²⁴ Tabak Report, ¶¶17-18.

³²⁵ Tabak Report, ¶10.

³²⁶ Tabak Deposition, page 180.

³²⁷ Tabak Report, ¶11.

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earnings could be due to a change in the value of the allegedly undisclosed credit risk, disclosed credit risk or any other type of realization of risk. Tabak has not done any analysis to distinguish whether the stock price decline on November 20, 2007 was due to an earnings loss related to the different types of mortgages that Freddie Mac held. Thus, the hypothetical essentially assumes the conclusion. It is Tabak's assignment to determine whether undisclosed risk caused Plaintiff's alleged losses. Instead, he assumes it.

227. Second, the lottery ticket hypothetical example assumes "no mention of lottery tickets had ever been made."³²⁸ This assumption is not applicable to this case because, as I detailed in Section IV above, Freddie Mac clearly disclosed extensive details about its exposure to the so-called "lottery tickets" in Tabak's example. In other words, Freddie Mac disclosed information on the credit characteristics of all loans in its guarantee portfolio, and it even disclosed information relating to the "non-traditional" loans it had purchased. In his deposition, Tabak confirmed that he did not review Freddie Mac's disclosures during the Relevant Period and as such he is not aware of Freddie Mac's disclosures.³²⁹ As a result, Tabak has no basis for opining on whether disclosed risk or undisclosed risk caused any alleged losses.

228. Third, Tabak's lottery example assumes that the stock price decline on November 20, 2007 "was due solely to the losses on those lottery tickets."³³⁰ As I discuss below, Freddie Mac disclosed several pieces of information on November 20, 2007, many of which are unrelated to Plaintiff's allegations. Tabak states that "[a]t this point, I have seen no additional "confounding" (i.e., unrelated to the allegations) information on that date that would require a disaggregation of the price reaction into a portion unrelated to the allegations." It is not clear how Tabak has determined this since he has not read, let alone analyzed, Freddie Mac's disclosures.

229. Given the foregoing, Tabak's counterfactual story about hypothetical lottery tickets is

³²⁸ Tabak Report, ¶17.

³²⁹ Tabak Deposition, at 185:4-199:10.

³³⁰ Tabak Report, ¶17.

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misplaced and proves nothing.

F. Tabak's loss causation opinion is circular and he assumes his conclusion

230. Overall, even putting aside the above fundamental shortcomings, Tabak's entire opinion on loss causation and materiality is unsubstantiated and he has done nothing more than assume his conclusions.

231. Tabak assumes liability, i.e., that the allegations of misrepresentations concealing exposure to subprime and non-traditional, higher-risk mortgages and other risks (i.e., the alleged "disclosure defects") are true.³³¹ Tabak does not opine that he disagrees with the Court's finding that there was no price impact of the alleged disclosure defects on the "front-end"³³² when inflation allegedly came into Freddie Mac's stock. On the "back-end"³³³ he also does not opine that he disagrees with the Court's finding that there was no price impact, and assumes that the "truth" regarding the alleged disclosure defects was revealed on November 20, 2007 when the concealed risks materialized, and the stock price fell in excess of market or industry-wide factors. He also assumes that confounding information revealed on November 20, 2007 if it existed, did not explain 100% of the price decline, even though he admits he did no calculations "to determine how much any confounding information contributed to plaintiffs' alleged losses" and admits he would need to do a disaggregation of confounding and allegation-related news to reach a "final opinion" on loss causation.³³⁴ He further admits he made no attempt to distinguish between the materialization of known risks and materialization of unknown risks related to the allegations that were disclosed on November 20, 2007 and that the materialization of known risks could have caused the losses.³³⁵

³³¹ Tabak Report, ¶29 and Tabak Deposition, at 46:11-47:23.

³³² Tabak Report, ¶1.

³³³ Tabak Report, ¶1.

³³⁴ Tabak Deposition, at 53:25-54:5 and 66:8-12.

³³⁵ Tabak Deposition, at 167:23-168:4 ("And did you make any effort to identify the quantum of stock price decline here attributable to disclosed risk as opposed to the materialization of undisclosed risk? A. No, I did not.").

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He provides no analysis to establish his conjecture that Freddie Mac's stock price reaction on November 20, 2007 actually reacted to the alleged disclosure defects other than assuming Plaintiff's allegations are true.

232. Tabak is thus assuming, with no analysis, that the excess return on November 20, 2007 is not sufficiently explained by (a) confounding factors unrelated to the allegations (like the unprecedented real estate and financial market turmoil and Freddie Mac's non-mortgage related losses) and (b) the materialization of disclosed risks related to the allegations. Hence, Tabak simply assumed his loss causation and materiality conclusions.

VII. Tabak fails to offer an opinion on the amount of damages

233. Tabak says he was not asked to calculate, and has not calculated, damages in this case.³³⁶ In his own words, he was asked by Plaintiff's counsel "not to actually offer a damages analysis but simply basically to state whether such an analysis would be possible."³³⁷ I am not in a position to comment on his opinion on the amount of damages in this case or his calculation of damages, because he has not offered an opinion on the amount of damages and has not calculated damages. I reserve any rights to comment on any damages opinion or calculation that he is hereafter allowed to offer.

VIII. Shapiro's opinions are based on insufficient facts, are not based on a reliable methodology, and to the extent a methodology was employed, he applied it in an unreliable manner.

234. Plaintiff's second expert, Shapiro, offers three main opinions: 1) "Credit risk, underwriting, and the related factor of economic capital were three of the primary categories of Freddie Mac information that were important to me as a financial analyst in assessing Freddie Mac's financial health;" 2) "Information I have learned since November 20, 2007, regarding those

³³⁶ Tabak Deposition, at 92:10-16, 99:22-100:5, and 101:9-15.

³³⁷ Tabak Deposition, at 283:17-20.

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three topics with respect to Freddie Mac would have dramatically changed my analysis of Freddie Mac's financial health;" and 3) "Information disclosed on November 20, 2007, helped to clarify that credit risk and economic capital issues played a role in the loss that occurred on that date (and that credit risk would likely cause large losses going forward)." ³³⁸

235. The first opinion is his personal view about what he thinks is important. I note that Shapiro was an equity analyst who published analyst reports relating to Freddie Mac during the Relevant Period. While it is not clear from his analyst reports that these were in fact the subject that he thought were important (I note that he wrote little about underwriting), Shapiro has offered no methodology to identify what he regarded as important other than his own "say so." As I discuss above, during the Relevant Period, Freddie Mac disclosed information on these three subject matters in its periodic reports, earnings calls and presentations and was required to submit weekly reports on its capital position to its regulator.

236. The second and third opinion seem to be offering an opinion that the alleged misstatements impacted Freddie Mac's stock price and were material. Shapiro implicitly opines on materiality without discussing materiality per se when he states that "[i]nformation I have learned since November 20, 2007, regarding [credit risk, underwriting and economic capital] with respect to Freddie Mac would have dramatically changed my analysis of Freddie Mac's financial health during the [Relevant Period] My reports for Fox-Pitt leading up to November 20, 2007, generally put Freddie Mac stock ratings at a positive 'outperform.' This would have changed to 'underperform' if prior to November 20, 2007, I had known Freddie Mac's true financial status with respect to credit risk, underwriting and economic capital during the Relevant Period." ³³⁹

237. Shapiro does not provide recognized or reliable methodology or analysis to support his second and third opinions. He does not provide any evidence to indicate how the alleged concealed information revealed on November 20, 2007 would have changed his "analysis of

³³⁸ Shapiro Report, ¶3.

³³⁹ Shapiro Report, ¶3.

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Freddie Mac's financial health." For example, Shapiro mentions a "default model" he created around the Relevant Period based on "data from the rating agencies to develop assumptions for frequency of default and loss severity," "to better understand [Freddie Mac's] credit risk" in its single family guarantee portfolio.³⁴⁰ He claims that the information that was concealed by Freddie Mac about its true exposure to Subprime-like, Alt-A, and other nontraditional mortgage loans "would have changed my contemporaneous analysis of the Company's financial health, the credit risk model I developed and my forecast of the Company's gross earnings."³⁴¹ However, Shapiro does not provide the model nor does he provide any details about its assumptions or how the model worked, and hence his opinion cannot be analyzed or rebutted. He also did not recreate his model or run any analysis on it as a basis for his opinions. Again, his opinions in this regard are simply his say so.

238. In addition, Shapiro states that the credit risk model he developed "worked only in the context of a 'traditional' mortgage portfolio."³⁴² As I discuss above, Freddie Mac disclosed its increased exposure to non-traditional mortgages as these types of mortgages became more prevalent in the marketplace, and it also disclosed that it expected "these products to default more often than traditional products and we consider this when determining our credit and guarantee fees."³⁴³ Thus, this suggests that Shapiro did not change his credit model even though he knew, or should have known, that Freddie Mac was increasing its purchase of non-traditional mortgages.

239. Shapiro's opinions also appear to be based on incorrect and speculative statements about what he could have known at the time. In writing about his model, he claims:

That model, however, worked only in the context of a "traditional" mortgage portfolio" and "[w]hat I did not know during the Relevant Period was the extent to which Freddie Mac was guaranteeing and/or purchasing non-traditional loans such as reduced documentation loans, Bulk Alt-A loans, caution loans (including C1, C2 and EA loans), risk-layered loans (including low/no doc with FICO <=

³⁴⁰ Shapiro Report, ¶¶19-21.

³⁴¹ Shapiro Report, ¶32.

³⁴² Shapiro Report, ¶21.

³⁴³ Freddie Mac 2006 Annual Report, page 24.

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*680, TLTV>90 and FICO<= 620, DU EA1, EA2 & DU EA3), interest-only and option arm loans.*³⁴⁴

240. I cannot know what Shapiro did or did not know at the time, but Freddie Mac made extensive disclosures about its intentions to increase exposure to nontraditional mortgages, and then detailed disclosures about that exposure, including purchases of reduced documentation, or Alt-A loans, loans with TLTV>90 and FICO<620, interest-only, and option ARM loans. As an example, on August 30, 2007 as part of Freddie Mac's Q2 2007 financial release, Freddie Mac detailed that 8%, or about \$125 billion of its \$1.56 trillion single family guarantee portfolio pertained to "interest-only" loans, and about 1%, or \$16 billion pertained to Option ARMs.³⁴⁵ In addition, in that financial release Freddie Mac also disclosed the proportion of single family mortgage portfolio that had "FICO<620," and "Original LTV > 90%" which is exactly what Shapiro states he "did not know" during the Relevant Period.

241. Shapiro's second and third opinions appear to be based in part on his effort to contrast external, public statements with what he terms "contemporaneous internal assessments."³⁴⁶ To the extent this effort is a basis for his opinions on materiality and loss causation, it is flawed in numerous respects.

242. First, Shapiro has not considered sufficient evidence. As discussed below, it appears that he cherry-picked quotes from documents provided to him by Plaintiff's counsel, while ignoring quotes in those same documents that were not consistent with his desired conclusions.

243. Second, Shapiro failed to consider sufficient evidence because he did not review deposition transcripts that related to the statements that he was considering. Of the dozens of transcripts of testimony taken in this case and related matters, Shapiro reviewed a single transcript.³⁴⁷ He was not even aware that there were dozens of transcripts of witness testimony

³⁴⁴ Shapiro Report, ¶21. (emphasis added).

³⁴⁵ Freddie Mac Q2 2007 Information Supplement.

³⁴⁶ Shapiro Report, ¶39.

³⁴⁷ Deposition of Howard Shapiro, January 10, 2024 ("Shapiro Deposition – January"), at 432:25-433:10. See also Shapiro Report, Materials Considered Exhibit.

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relating to this matter.³⁴⁸

244. Third, when confronted with deposition testimony that contradicted his opinions, he dismissed all testimony as unreliable, based on his speculation that it was the result of “coaching” by legal counsel and rendered less relevant due to the passage of time.³⁴⁹

245. Fourth, Shapiro sometimes contrasted external statements with internal assessments that did not even address the same subject of the external statements, let alone contradict them.³⁵⁰

246. Fifth, Shapiro’s approach to contrasting external statements with internal assessments did not focus on “contemporaneous” internal assessments. On their face, Exhibits 3 and 4 of his report contrast public statements with internal statements that are not contemporaneous, but rather many months and sometimes years apart. At deposition, Shapiro testified that by “contemporaneous” he meant only during the approximately 16-month long Relevant Period.³⁵¹ Even that is not true, as the Exhibits reference documents outside the Relevant Period.³⁵²

247. Sixth, Shapiro reached conclusions that are not supported by the evidence he cites. For example, Shapiro stated in his report: “Indeed, Freddie Mac internally reported that these loans were defaulting more quickly and in greater numbers than even regular subprime loans, which generally default about 8x more than traditional 30-year fixed rate mortgages.”³⁵³ His support for that statement was a May 2007 Credit Risk Monitoring Report.³⁵⁴ In fact, as he admitted at deposition, that document did not support that fact, but rather the unremarkable proposition that Freddie Mac’s loans that had higher risk defaulted more frequently than its overall book of loans.³⁵⁵

248. Seventh, Shapiro testified that he assumed that all contemporaneous internal

³⁴⁸ Shapiro Deposition – January, at 616:19-23.

³⁴⁹ Shapiro Deposition – January, at 616:19-23, at 616:24-618:8.

³⁵⁰ See Shapiro Report, Exhibits 3, 4.

³⁵¹ Shapiro Deposition – January, at 601:6-602:3.

³⁵² Shapiro Deposition – January, at 602:15-21.

³⁵³ Shapiro Report, ¶31.

³⁵⁴ Shapiro Report, ¶31.

³⁵⁵ Shapiro Deposition – January, at 444:18-445:23.

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assessments were true,³⁵⁶ but he conveniently abandoned that assumption, as discussed in the paragraph below, when he encountered contemporaneous internal assessments inconsistent with his conclusions.

249. Eighth, Shapiro ignored documentary evidence that was inconsistent with his desired conclusions, even when his limited review of documents still resulted in his exposure to these facts. For example, he cited a presentation to Freddie Mac's Board of Directors in an effort to suggest that Freddie Mac purchased subprime loans, but that very board presentation included numerous statements that were consistent with Freddie Mac's public statements, including that "[o]ur involvement to date has been buying AAA tranches of others' securitizations" and "[w]e participate in subprime by buying AAA bonds in the retained portfolio."³⁵⁷ Shapiro ignored these facts, speculating at his deposition that the board was being misled by management.³⁵⁸ Likewise, the May 2007 Credit Risk Monitoring Report that Shapiro miscited, as described above, contained the statement that "Currently, no subprime loans are within the single family portfolio" on the exact page that Shapiro cited, and yet he ignored that statement as well.³⁵⁹ Even though that statement is consistent with Defendant Syron's external statement that "there are basically no subprime loans in the [guaranteed] portfolio," Shapiro ignored the consistent internal documentary evidence, testifying that it was simply a mistake.

250. Moreover, Shapiro's opinions are not consistent with his analyst reports and participation during earnings calls. On October 24, 2007 a Fox-Pitt Kelton analyst report published by Shapiro forecasted Q3 2007 losses that were similar to the actual mark-to-market losses disclosed by Freddie Mac on the alleged disclosure date, November 20, 2007. The report states that: "[b]ased on data released today by FRE, we now estimate that the company will report a large

³⁵⁶ Shapiro Deposition – January, at 497:22-25.

³⁵⁷ Shapiro Deposition – January, at 498:5-17; 501:21-5-2:16.

³⁵⁸ Shapiro Deposition – January, at 498:5-17; 501:21-5-2:16. *See also* Shapiro Deposition – January, at 507:12-508:19.

³⁵⁹ Shapiro Deposition – January, at 518:13-519:15.

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GAAP loss of around (\$1.6 b), or around (\$2.45) per share, in the 3rd quarter due to mark-to-market changes in excess of \$3 b on its interest rate derivative hedges and on its credit exposure. We stress that given the extreme volatility during Q3 that we have less confidence than normal in our estimates.”³⁶⁰ In the same report, Shapiro writes about Freddie Mac’s capital position, stating that “FRE ended the second quarter with a \$2 b capital surplus on top of its minimum capital requirement and OFHEO surcharge. Yet in today’s volume summary release, the company says that sales in its investment portfolio were necessary to maintain its 30% OFHEO-mandated capital surplus, which suggests that its capital surplus declined by over \$2 b.” Thus, Shapiro seemed to have sufficient information to be able to estimate these mark-to-market losses and Freddie Mac’s capital position prior to November 20, 2007.

251. Notably, Shapiro’s opinions and related testimony undermine Plaintiff’s loss causation allegations. In the TAC, Plaintiffs alleged “[a]s discussed above, *Freddie Mac’s third quarter losses* disclosed on November 20, 2007 showed that Freddie Mac faced a previously non-disclosed yet serious financial risk from its conscious decision to increase its exposure to subprime and nontraditional mortgages.”³⁶¹ Likewise, in the Tabak Report, Tabak opined that “[t]he market was reacting to something that distinguished Freddie Mac from the other companies. Plaintiff argues that this “something” was that *Freddie Mac’s losses* were unexpectedly large because Defendants had understated Freddie Mac’s exposure to the factors that were affecting the rest of the financial industry.”³⁶²

252. Shapiro was retained by Plaintiff to, among other things, answer the following question: “Freddie Mac reported a loss of \$2 billion (or \$3.29 per diluted share) on November 20, 2007, and warned of further expected significant losses. As an analyst, and based upon the information you have reviewed, what major factors contributed to the reported loss?”³⁶³ At

³⁶⁰ Fox-Pitt Kelton, “Expect Large GAAP Loss In Quarter,” October 24 2007.

³⁶¹ TAC, ¶135.

³⁶² Tabak Report, ¶24-25.

³⁶³ Shapiro Report, ¶2.

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deposition, Shapiro confirmed that “when Freddie Mac announced a \$2 billion GAAP loss” he “was not surprised.”³⁶⁴ Shapiro’s lack of surprise at the \$2 billion loss Freddie Mac announced on November 20, 2007 contradicts the “materialization of concealed risks” loss causation theory that both the TAC and Plaintiff’s other expert, Tabak, espouse. If market analysts were not surprised by Freddie Mac’s announced losses, then the \$2 billion loss could not have represented the materialization of undisclosed risks.

253. At deposition, Shapiro further stated that, during Freddie Mac’s analyst conference calls, he asked questions that he thought were “important at the time [and] that hadn’t been covered already.”³⁶⁵ During the analyst call on November 20, 2007, Shapiro’s first question was not about credit risk, or underwriting standards, or the \$2 billion loss, but rather his first question was on whether Freddie Mac asked OFHEO “for relief on the 30% capital surcharge” since Freddie Mac was proposing to dilute shareholders.³⁶⁶ The analyst report that Shapiro issued after the November 20, 2007 disclosure also concentrates on Freddie Mac’s (and Fannie Mae’s) capital position. This confirms, as I state above, that the market was concerned over Freddie Mac’s capital position in light of the losses announced on November 20, 2007 for the current and future quarters and current market conditions of illiquidity, volatility, and general deterioration.

254. Illustrating the extent to which no fraud was revealed on November 20, 2007, Shapiro thereafter, in mid-2008, recommended to investors that they buy Freddie Mac stock.³⁶⁷

³⁶⁴ Deposition of Howard Shapiro, November 6, 2023, (“Shapiro Deposition - November”) at 243:20-25. *See also* Shapiro Deposition - November, at 244:1-23 (“Q. In fact, the announcement of the \$2 billion loss on November 20, 2007 was consistent with your prediction from October 24 of 2007? A. Yes. Q. In fact, you predicted a \$1.6 billion loss, right? A. Yes. Q. You write in the last sentence of the first paragraph “We stress that given the extreme volatility during Q3 that we have less confidence than normal in our estimates.” Right? A. Yes. Q. You knew that you might miss the mark to some extent, right? A. Yes. Q. For that reason you were probably even less surprised it was a \$2 billion loss because you knew that you could only have so much confidence in your estimates due to volatility, right? A. Yes.”).

³⁶⁵ Shapiro Deposition - November, at 267:13-16.

³⁶⁶ Shapiro’s first question was “Hi. I just wanted to follow up on David’s question and ask you point blank, did you go to OFHEO and ask for relief on the 30% capital surcharge? You are proposing to dilute shareholders, so please don’t tell us that it’s a question you do not want to answer on a public call.” Freddie Mac Q3 2007 Earnings Call. *See also*, Shapiro Deposition - November, at 273:9-274:23.

³⁶⁷ Fox-Pitt Kelton, “FRE: Now a Revenue Growth Story,” May 14, 2008.

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255. In summary and consistent with my affirmative findings, my review and analysis of Shapiro's opinions shows that Shapiro has not established materiality or loss causation. Rather, his opinions are based on insufficient facts, lack a basis in a reliable methodology, and to the extent his approach can be considered a methodology, he did not reliably apply it.

IX. The individual Defendant's trading in Freddie Mac securities was not unusual or suspicious in timing or amount, and their holdings in Freddie Mac securities declined substantially in value over the Relevant Period.

256. I have also been asked by counsel to analyze the individual Defendant's trading records to determine if their trading pattern over the Relevant Period is consistent with allegations that these individual Defendants had a motive to commit fraud. I am informed by counsel that trading by individual defendants in a company's securities that is unusual or suspicious in timing or amount such that individual defendants benefited from such sales may constitute evidence of motive and opportunity to commit fraud.

257. Upon reviewing the relevant trading records, I conclude that none of the individual Defendants engaged in trading that is unusual or suspicious in timing or amount. To the contrary, the evidence shows that the individual Defendants' holdings of Freddie Mac securities declined substantially in value over the course of the Relevant Period.

258. Exhibits 7A - 7D detail information from the Form 4 disclosures during the Relevant Period that are publicly available, and Table 2 below shows the summary information of holdings during the same time period.

259. The Table shows that neither Richard Syron, Eugene McQuade, nor Anthony "Buddy" Pizel voluntarily sold any shares of Freddie Mac during the Relevant Period.³⁶⁸ Mr.

³⁶⁸ I understand from counsel that Buddy Pizel did not sell any shares during the proposed class period because he had none to sell, and that this fact was conceded by Plaintiffs.

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Syron, Ms. Cook, and Mr. McQuade were subject to involuntary, automatic forfeitures of shares “to cover taxes associated with the lapse of restrictions on stock.” Thus, there were no voluntary sales by these individual Defendants in Freddie Mac securities at all, let alone trades that are unusual or suspicious in timing or amount.

260. I do not characterize the disposition of shares that are automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on stock as “sale” of shares. I understand that the purpose of such transactions, deemed Code F (for “forfeiture”), is different than that of voluntarily selling shares.

261. Patricia Cook, Executive Vice President and Chief Business Officer was the only individual Defendant to sell shares during the Relevant Period, but I understand that she did so pursuant to a pre-arranged Rule 10b5-1 trading plan. Ms. Cook sold less than 10% of her holdings at the time, 7,105 shares, on January 3, 2007 for \$68.20 per share. This was the only time that Ms. Cook sold shares during the Relevant Period.

262. Table 2 below also shows that the value of Freddie Mac shares held by individual Defendants declined between the beginning and end of the Relevant Period, August 1, 2006 to November 20, 2007. As of August 1, 2006, Mr. Syron owned over 360,000 Freddie Mac shares worth approximately \$21 million. And, as of November 20, 2007, the Freddie Mac shares held by Mr. Syron increased to approximately 422,000 shares and yet the value of his shares held declined by over \$9 million to \$11.3 million.

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Table 2: Summary of individual Defendants' trading activity in Freddie Mac stock during the Relevant Period

| Executive [a] | Position [b] | Beginning of Relevant Period | | | During Relevant Period | | | End of Relevant Period | | |
|------------------|---|------------------------------|--------------------------------------|---------------------------------------|---------------------------|-----------------------|--------------------------------------|------------------------|---|---------------------------------------|
| | | Shares owned [c] | Price on August 1, 2006 [d] | Price * Shares owned (\$mm) [e] | Shares acquired [f] | Shares sold [g] | Shares retained by company [h] | Shares owned [i] | Price on November 20, 2007 [j] | Price * Shares owned (\$mm) [k] |
| [1] | Richard F. Syron Chairman and CEO | 364,171 | \$57.53 | \$20.95 | 107,824 | - | 50,163 | 421,832 | \$26.74 | \$11.28 |
| [2] | Patricia L. Cook Chief Business Officer | 77,587 | \$57.53 | \$4.46 | 34,642 | 7,105 | 13,488 | 91,636 | \$26.74 | \$2.45 |
| [3] | Eugene McQuade President and COO | 209,456 | \$57.53 | \$12.05 | 71,778 | - | 42,723 | 238,511 | \$26.74 | \$6.38 |
| [4] | Anthony Pizsel Executive VP and CFO | - | | | 116,553 | - | - | 116,553 | \$26.74 | \$3.12 |

263. As of August 1, 2006, Ms. Cook owned approximately 78,000 Freddie Mac shares worth about \$4.5 million. And, as of the end of the Relevant Period, the Freddie Mac number of shares held by Ms. Cook increased to approximately 92,000 while the value of those shares declined by \$2 million to \$2.45 million. Similarly, the value of the shares held by Mr. McQuade decreased during this time period. Mr. McQuade held approximately 209,000 shares worth \$12 million as of August 1, 2006 and over 238,000 shares worth approximately \$6.4 million as of the end of the period.

264. In summary, I do not find any evidence that the individual Defendants engaged in trading in Freddie Mac securities that was unusual or suspicious in timing or amount. They did not benefit from the alleged fraud during the Relevant Period. Rather, their holdings in Freddie Mac stock declined substantially over the course of the Relevant Period.

Respectfully submitted,



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January 19, 2024



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Dr. Mukesh Bajaj is a Senior Consultant in CRA's Finance Practice. He has managed hundreds of consulting assignments involving economic and financial issues. His areas of expertise include: securities fraud, valuation of complex derivatives and intellectual property, insider trading, financial market microstructure, intangible assets, transfer pricing, interests in closely-held firms, warrants, restricted stock and other complex contingent securities, and purchase price allocation studies. He was previously Managing Director and Global Head of the Securities & Finance Practice at Navigant. Prior to that, Dr. Bajaj founded AFE Consulting and served as its President. Dr. Bajaj has also consulted on financial strategy and acquisition analysis.

Dr. Bajaj has testified in various Federal and State Courts, the Superior Court of California, the State Board of Equalization in California, the U.S. Tax Court, arbitrations, mediations and in IRS Appeals proceedings. He has also testified in Canadian and Australian courts, testified in JAMS arbitration and filed an expert report in the International Center for Settlement of Investment Disputes.

In addition to his consulting work, Dr. Bajaj has taught corporate finance, investments, and financial engineering courses in the MBA and Masters in Financial Engineering programs at the Haas School of Business at the University of California at Berkeley. Prior to his consulting practice, He was an assistant professor of finance and business economics at the University of Southern California where he taught undergraduate and graduate courses in finance. Dr. Bajaj is the recipient of several teaching awards and scholastic honors and has published several articles in leading academic and applied journals, such as *The Journal of Finance*, *The Journal of Financial Economics*, *The Journal of Financial Research*, *The Journal of Applied Finance*, *International Economic Review*, *Research in Finance*, and *Research in Law and Economics*.

Expert Testimony on Record

In re Synchronoss Technologies, Inc. Securities Litigation, Civil Action No. 17-2978 (FLW) (LHG) in the United States District Court for the District of New Jersey. Testified in deposition regarding the efficiency of the market for Synchronoss Technologies' stock. Deposition in March 2021.

In re Teva Securities Litigation, No. 3:17-cv-00558 (SRU) in the United States District Court of Connecticut. Testified in deposition regarding the efficiency of the market for Teva Pharmaceuticals' ADS, Preferred Shares, and Notes. Deposition in October 2020.

Charles River Associates

Wendy C. H. Wellin, as Special Administrator of the Estate of Keith S. Wellin and as Trustee of the Keith S. Wellin Florida Revocable Living Trust u/a/d December 11, 2001, v. Peter J. Wellin, et al. and related cases, Civil Action Nos. 2:13-cv-01831-DCN, 2:13-cv-03595-DCN, and 2:13-cv-04067-DCN in the United States District Court for the District of South Carolina. Testified in depositions regarding the equivalent value of limited partnership units. Depositions in August 2018 and November 2018.

The Tulalip Tribes, et al., v. The State of Washington, et al., Case No. 2:15-cv-00940 in the United States District Court for the District of Washington. Testified in deposition and at trial regarding the economic and governmental activities of the Tulalip tribe and the State of Washington and Snohomish County, respectively, and the relationship of such activities to sales and other taxes assessed by the State of Washington and Snohomish County. Deposition in July 2017. Trial in May 2018.

Ohio Public Employees Retirement System, On Behalf of Itself and all Others Similarly Situated, v. Federal Home Loan Mortgage Corporation a/k/a Freddie Mac, Richard F. Syron, Patricia L. Cook, Anthony S. Pizel, and Eugene M. McQuade, Civil Action No. 4:08-cv-160 in the United States District Court for the Northern District of Ohio, Eastern Division (Youngstown). Testified in depositions and a hearing concerning the efficiency of the market for Freddie Mac's common stock and the economic evidence as it related to the Plaintiff's allegations that alleged misrepresentations and omissions had an impact on the price of Freddie's Mac's stock. Hearing in April 2018. Depositions in January 2013 and September 2017.

In re Allergan, Inc. Proxy Violation Securities Litigation, C.A. 14-cv-02004 (N.D. Cal 2014). Testified in deposition on whether the common stock of Allergan Inc. traded in an efficient market during the Class Period and whether damages in the action are subject to a common formula that can be applied Class-wide (December 2016). Also testified in deposition on the economic materiality of alleged non-public information and damages allegedly caused by insider trading on this information (July 2017). Depositions in December 2016 and July 2017.

OpenGate Capital, LLC, et al., v. Thermo Fisher Scientific Inc., Civil No. 13-475-GMS in the United States District Court for the District of Delaware. Testified in deposition regarding damages allegedly caused by claims of fraudulent misrepresentation in connection with the purchase of a division of Thermo Fisher by OpenGate. Deposition in November 2015.

Continental Industries Group, Inc. v. FTS International Services, LLC, et al., Case Nos. 12-CV-05599 and 12-CV-06966 in the United States District Court, Southern District of New York. Testified in deposition and trial on economic damages resulting from the alleged breaches of two supply agreements between the Plaintiff and Defendants. Deposition in October 2014. Trial in October 2015.

In re: UBS Financial Services, Inc. of Puerto Rico Securities Litigation, Civil Case No.: 3:12-cv-01663-CCC, United States District Court for the District of Puerto Rico. Testified in deposition on economic issues related to certain Puerto Rico closed-end funds for class certification purposes. Deposition in September 2015.

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In the Matter of the Arbitration between Offshore Exploration and Production LLC, Claimant/Seller, v. Korea National Oil Corporation and Ecopetrol, S.A., Respondents/Purchasers, ICDR Case No. 50 198 T 00825 1 in the International Centre for Dispute Resolution. Testified in arbitration proceedings on the calculation of prejudgment interest related to payments Claimant/Seller asserted should have been made pursuant to an escrow agreement between Claimant/Seller and Respondents/Purchasers. Arbitration in February 2014.

Sekisui America Corporation and Sekisui Medical Co., Ltd. v. Richard and Mary Louise Trudel-Hart, Case No. 12-CIV-03479 in the United States District Court, Southern District of New York. Testified in deposition on damages in an action alleging breach of contract arising out of the sale of a medical diagnostics company. Deposition in September 2013.

Securities and Exchange Commission v. Manouchehr Moshayedi, Case No. 12CV-01179-JVS-JPR in the United States District Court for the Central District of California. Testified in deposition regarding allegations by the SEC of insider trading against the founder and former CEO of STEC, a maker of custom memory solutions. Deposition in August 2013.

In re American International Group, Inc. 2008 Securities Litigation, Master File No. 08-CV-4772-LTS in the United States District Court, Southern District of New York. Testified in depositions and in an evidentiary hearing on market efficiency at class certification stage in a securities fraud class action alleging that Defendants materially misstated the extent to which AIG had accumulated exposure to the subprime mortgage market through its securities lending program and its credit default swap ("CDS") portfolio. Depositions in November 2011 and March 2012. Evidentiary Hearing in April 2013.

Securities and Exchange Commission v. Fabrice Tourre, Case No. 10-CV-3229 (KBF) in the United States District Court, Southern District of New York. Testified in deposition on the economic materiality of the nondisclosure of certain hedge fund positions with respect to a particular synthetic ABS CDO. Deposition in February 2013.

Cora E. Bennett v. Sprint Nextel Corporation, Gary D. Forsee, Paul N. Saleh and William G. Arendt, Case No. 09-CV-2122 EFM/KMH in the United States District Court for the District of Kansas. In the class-certification stage of a securities fraud class action, testified in deposition regarding the economic evidence supporting the claim that Sprint bonds traded in efficient markets throughout the Class Period. Deposition in June 2012.

State of New Jersey, Department of Treasury, Division of Investment, on behalf of Common Pension Fund A. v. Merrill Lynch & Co. and Bank of America Corp., Case No. L-3855-09 in the Superior Court of New Jersey. Testified in deposition on the materiality of accounting allegations, loss causation and damages calculations in connection with transactions involving the purchase and subsequent conversion of a convertible preferred security to common stock. Deposition in May 2012.

Charles River Associates

In re Richard Kirby v Centro Properties Ltd & Ors (VID 326 of 2008), *Richard Kirby v Centro Retail Ltd & Ors* (VID 327 of 2008), and *Nicholas Stott v Pricewaterhouse Securities Ltd* (VID 1028 of 2010), in the Federal Court of Australia. In a pair of securities class action disputes in Australia, testified at trial on alleged disclosure deficiencies of two Australian REITs in connection with certain short-term and long-term debts and the effect of those disclosures on the prices of the REITs' two stapled securities, as well as on the condition of the global credit market during the class period. Trial in May 2012.

In re Lehman Brothers Securities and ERISA Litigation, Case No. 09-MD-2017 (LAK) in United States District Court, Southern District of New York. Testified in deposition on the market for structured products and the market's general awareness of credit risks associated with structured finance products in the class-certification stage of a securities fraud class action alleging materially false and misleading statements and omissions in the offering documents of principal-protected notes. Deposition in April 2012.

In re International Textile Group Merger Litigation, C.A. No. 2009-CP-23-3346 in the Court of Common Pleas for the State of South Carolina, County of Greenville. Testified in deposition on damages and loss causation for class action and derivatives suits arising from a merger. Deposition in April 2012.

Bank of America National Association, and Banc of America Securities LLC v. Bear Stearns Asset Management Inc., Ralph Cioffi, Matthew Tannin, and Raymond McGarrigal, Case No. 1:08-cv-0265-AJN in the United States District Court, Southern District of New York. Testified in deposition on damages related to a securitization transaction and the Defendants' alleged failure to disclose the financial condition of their hedge funds. Deposition in March 2012.

Between: Howard Green and Anne Bell, and Canadian Imperial Bank of Commerce, Gerald McCaughey, Tom Woods, Brian G. Shaw, And Ken Kilgour, No. CV-08-00359335-0000, Ontario Superior Court of Justice. Testified in deposition on loss causation in proceedings under the Class Proceedings Act, 1992 alleging that Defendants made various misrepresentations regarding CIBC's CDO exposure and the extent of impairment of CIBC's CDO positions. Deposition in December 2011.

In re Tronox Inc. Securities Litigation, No. 09 Civ. 06220 (SAS), United States District Court, Southern District of New York. Testified in deposition on market efficiency at class certification stage in a securities fraud class action alleging that Defendants materially misstated the extent of legacy environmental liabilities. Deposition in December 2011.

In re Federal Home Loan Mortgage Corp. (Freddie Mac) Securities Litigation, Case No. 1:09-MD-2072 in the United States District Court, Southern District of New York. (Appeal denied by United States Court of Appeals for the Second Circuit, May 31, 2012.) Testified in deposition and hearing before the Court on market efficiency at class certification stage in a securities fraud class action alleging misrepresentations concerning Freddie Mac's capitalization and credit risk exposure. Depositions in August 2011 and November 2011. Court hearing in November and December 2011.

Estate of John F. Koons, III v. Commissioner of Internal Revenue, Docket Nos. 19771-09 and 19772-09, in the United States Tax Court. Testified at trial regarding the valuation of certain membership interests in a limited corporation. March 2011.

Charles River Associates

In Re Altria Group, Inc. v. United States of America, Case No. 1:06-cv-09430-RJH in the United States District Court, Southern District of New York. Testified in deposition and at trial regarding economic issues affecting tax treatment of certain leveraged lease transactions. Deposition in December 2007. Trial in June-July 2009.

Madison Tyler Holdings, LLC, et al., Claimants v. Financial Asset Trading & Technology of California, LLC, et al., Respondents; Financial Asset Trading & Technology of California, et al., Cross-Claimants, v. Madison Tyler Holdings, LLC, et al., Cross-Respondents; and related arbitration *Madison Tyler Holdings, a Delaware Limited Liability Company, et al., Counter-Claimants and Respondents v. Rajashree Karwa, an individual, Counter-Respondent and Claimant*. Arbitration Before JAMS, JAMS Ref. No. 1220038462. Testified in deposition on economic analysis of source of value creation in algorithmic trading strategies. June 2009.

Lawrence E. Jaffe Pension Plan, On Behalf of Itself and All Others Similarly Situated, v. Household International, Inc., et al., Case No. 02-C-5893 in the United States District Court, Northern District of Illinois, Eastern Division. Testified in deposition and at trial on loss causation and damages in a securities class action alleging securities fraud arising from purported accounting irregularities and predatory lending practices to subprime borrowers. Deposition in March 2008. Trial in May 2009.

Guerrero Family Trust, Carmen De Leon Guerrero, Jose T. Tenorio Trust, Estate of Santiago C. Tenorio, Juan T. Guerrero, Jesus T. Guerrero, and AJT Trust, v. Kinki Nippon Tourist Co. LTD, Saipan Hotel Corporation, Pacific Development Inc., Pedro J.L. Igitol, in his official capacity of Secretary of Saipan Hotel Corporation, Morgan Stanley Japan Limited, Marianas Holdings, LLC, and K.K. ING Karuizawa Training Institute, Civil Action No. 04-0574D in the Superior Court of the Commonwealth of the Northern Mariana Islands. Testified in deposition on damages arising from alleged abuse of fiduciary duty and dilution of minority shareholders' stock holding. July 2008.

In the Matter of David A. Finnerty, et al., Administrative Proceeding, File No. 3-11893, Before the Securities and Exchange Commission. Testified in trial regarding the trading patterns of certain NYSE specialists in connection with alleged violations of priority rules and securities laws. February and March 2008.

In Re NYSE Specialists Securities Litigation, Master File No. 03 Civ. 8264 (RWS) in the United States District Court, Southern District of New York. Testified in deposition on class certification issues relating to alleged trading-rule violations by New York Stock Exchange specialist firms. November 2007.

Theo Bullmore and Phillip S. Stenger, as Joint Official Liquidators of Beacon Hill Master Ltd. (In Official Liquidation), Plaintiffs v. Ernst & Young Cayman Islands, Ernst & Young LLP, Beacon Hill, Asset Management, LLC, John D. Barry, Thomas Daniels, John Irwin, Mark Miszkiewicz, and ATC Fund Services (Cayman) Limited f/k/a ATC Fund Administrators (Cayman) Limited, Defendants, Index No.: 104314/05 in the Supreme Court of the State of New York, County of New York. Testified in deposition on the causation and alleged damages experienced by the Beacon Hill Master Fund caused by an alleged improper audit by Ernst & Young Cayman Islands. September 2007.

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Sterling Savings Association and Sterling Financial Corporation v. United States of America, Defendant, Case No. 95-829C in the United States Court of Federal Claims. Testified in deposition and at trial on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. Depositions in June 2002 and May 2004. Trial in July 2007.

Adelphia Communications Corp., Plaintiff v. Deloitte & Touche LLP, (Defendant) v. John Rigas, Timothy Rigas, Michael Rigas and James Rigas (Additional Defendants), in the Court of Common Pleas, Philadelphia County. Testified in deposition on loss causation and damages issues related to alleged improper conduct by auditor. May 2007.

David S. and Malia A. Litman v. United States of America, Case No. 05-956T; *Robert B. and Michelle S. Diener v. United States of America*, Case No. 05-971T; *Hotels.com Inc. and Subsidiaries (f/k/a Hotel Reservations Network, Inc.) v. United States of America*, Case No. 06-285T. Judge Christine O.C. Miller in the United States Court of Federal Claims. Testified in deposition and at trial on valuation of 9.9 million shares of stock issued to certain former officers of Hotels.com for tax purposes. Deposition in July 2006. Trial in May 2007

Jane Z. Astleford, Donor, Petitioner v. Commissioner of the Internal Revenue, Respondent, Docket No 4342-06 in the U.S. Tax Court. Testified at trial on value of certain interests in a limited partnership. March 2007.

United States of America v. Sanjay Kumar and Stephen Richards, 04-CR-0846 (ILG), in the United States District Court, Eastern District of New York. Testified at trial on loss causation and damages issues in criminal securities fraud matter in which defendants pleaded guilty to improper revenue recognition related accounting irregularities. October 2006.

The Procter and Gamble Company and Subsidiaries & Proctor and Gamble FSC (Barbados) vs. The United States of America, Case number 1:05cv355 in United States District Court for the Southern District of Ohio, Western Division. Testified in deposition on fair market value of certain technologies donated by Procter and Gamble to various entities in connection with a tax dispute. September 2006.

United States of America v. Richard Volpe, Indictment S1 05 Cr. 390 (SHS) in the United States District Court, Southern District of New York. Testified at trial on liability issues in criminal securities fraud matter alleging illegal trading by certain New York Stock Exchange specialists. August 2006.

United States of America v. Robert Scavone, Indictment S1 05 Cr. 390 (SHS) in the United States District Court, Southern District of New York. Testified at trial on liability issues in criminal securities fraud matter alleging illegal trading by certain New York Stock Exchange specialists. July 2006.

United States of America v. Michael Hayward and Michael Stern, Indictment S1 05 Cr. 390 (SHS) in the United States District Court, Southern District of New York. Testified at trial on liability issues in criminal securities fraud matter alleging illegal trading by certain New York Stock Exchange specialists. July 2006.

Commonwealth Holdings, Inc., Profit Sharing Plan & Trust, James T. Waddill, IV et al. v. Salomon Smith Barney, Inc. and John Henry Spatz, in a hearing before NASD. Testified on loss causation and damages aspects of Plaintiffs' claims arising from alleged securities fraud. September 2005.

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Messrs. Robert, Charles and John Switzer et al. v. Deutsche Bank et al., in a hearing before NASD. Testified on liability and damages aspects of Plaintiffs' damage claims arising from alleged unsuitable investments in certain leveraged debt obligations. June 2005.

IDT Corp. v Telfonica S.A. et al., Case No. 01 CV 471 in the United States District Court for New Jersey. Testified in deposition on liability and loss causation aspects in a claim of alleged securities fraud. April 2005.

Sherwin I. Ray et al. v. Citigroup Global Markets, Inc. f/k/a Salomon Smith Barney, Inc., Citigroup, Inc. and John Henry Spatz, Case No. 03C3157 in the United States District Court for the Northern District of Illinois, Eastern Division. Testified in deposition on liability and loss causation in a claim of alleged securities fraud. March 2005.

American National Bank and Trust Company of Chicago, as Trustee f/b/o Emerald Investments LP, and Emerald Investments LP, an Illinois Partnership v. Allmerica Financial Life Insurance and Annuity Company. Testified in deposition on certain liability aspects in a breach of contracts claim involving certain mutual fund trading strategies. January 2005.

In re WorldCom, Inc. ERISA Litigation, Master File No. 02 Civ. 4816 (DLC) in the United States District Court, Southern District of New York. Testified in deposition on liability aspects of Plaintiffs' damage claims in an ERISA class action. January 2005.

Xilinx Inc. and Subsidiaries v. Commissioner of Internal Revenue Service, Docket Nos. 004142-01 and 00702-03. Testified in U.S. Tax Court on whether grant date value, or certain spread upon exercise, of employee stock options should be considered part of cost sharing pool in a cost sharing arrangement between Xilinx, Inc. and its Irish affiliate. Trial in July 2004. Submitted affidavit in connection with motion to dismiss in June 2002.

Maxtor Corporation v. Koninklijke Philips Electronics N.V., Philips Semiconductors B.V., Philips Semiconductor International B.V., Philips Electronics North America Corporation, Philips Semiconductors, Inc., Philips Semiconductor Manufacturing, Inc., Philips France, Philips Japan, Ltd., and Does 1 through 25, Case No. CV 808650 in the Superior Court of the State of California, County of Santa Clara. Testified in deposition on damages analysis in connection with alleged design failure of a chip used in manufacturing computer hard drives. March 2004.

Mid-Continent Federal Savings Bank v. United States of America, Defendant, Case No. 95-472C in the United States Court of Federal Claims. Testified in deposition and at trial in Court of Federal Claims on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. Deposition in April 2002. Trial in July 2003.

Robert F. Flood v. Bessemer Trust Company, N.A.; Robert G. Vanneman; and Does 1-25 and Stephen Gorosh v. same defendants. Testified in deposition on alleged damages due to failure to diversify. November 2002.

Christine P. Rales, Plaintiff v. Steven M. Rales, Defendant, Civil Action No. 02DR166-D in the Superior Court of District of Columbia. Testified in deposition on the fair market value of a block of 19.67 million shares of common stock of Danaher Corporation held by Stephen M. Rales. February 2002.

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American National Bank and Trust Company of Chicago, as Trustee f/b/o Emerald Investments LP, and Emerald Investments LP, an Illinois Partnership v. AXA Client Solutions, LLC, The Equitable Life Assurance Society of the United States, and AXA Financial, Inc., Case No. 00 C 6786. Testified in deposition on damages due to alleged breach of contract involving certain mutual fund trading strategies. May 2002.

Statewide Savings Bank, S.L.A., Plaintiff v. United States of America, Defendant, Case No. 95-779C in the United States Court of Federal Claims. Testified in deposition on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. February 2002.

Charles T. McCord and Mary S. McCord, Donors, Petitioners v. Commissioner of Internal Revenue, Respondent, Docket No 7048-00 in the U.S. Tax Court. Testified at trial on value of several interests in a limited partnership. May 2001.

Estate of Elma Middleton Dailey, Deceased, K. Robert Dailey, II, Executor, Petitioner v. Commissioner of Internal Revenue, Respondent, Docket Nos 6251-00 and 6262-00 in the U.S. Tax Court. Testified at trial on value of several interests in a limited partnership. May 2001.

John G. Balletto v. Xoom.com, Inc., Case No. 306798 in the Superior Court of California, San Francisco County. Testified in deposition and at trial relating to damages due to alleged breach of contract. January 2001. Deposition in January 2001. Trial in March 2001.

Edison International (1585456), Mission First Financial (1431482), Edison Capital (1417993), Edison Funding Company (1417994), Renewable Energy Capital Company (0715920), Mission Funding Epsilon (1426267) v. California Franchise Tax Board. Testified before the State Board of Equalization on whether Mission First Financial and its parent company SCEcorp formed a unitary business for tax purposes during 1988 to 1990. December 2000.

Framatome Connectors USA Holdings, Inc. and Subsidiaries, et al. v. Commissioner of Internal Revenue Service, Docket No. 5030-98, 9160-99, 118 T.C. 32 (2002), aff'd, 108 Fed. Appx. 683, (2004). Testified in trial on whether Burndy Japan was a controlled foreign corporation of the petitioner for the years 1988, 1989 and 1992 under section 957(a) (2) of the Internal Revenue Code. October 2000.

Barry G. Hittner, Receiver of American Universal Insurance Company v. Sequa Corporation, et al., M.D.L. No. 972, C.A. No. 1:92-512. Testified in deposition on the value of a \$50 million note backed by certain real estate. June 2000.

Estate of Richie C. Heck, Deceased, Gary Heck, Special Administrator, Plaintiff v. Commissioner of Internal Revenue Service, Defendant. Docket No. 11619-99 in the U.S. Tax Court. Testified at trial on the valuation of a minority interest in F. Korbel & Bros., Inc. June 2000.

American Heritage Bancorp, Plaintiff v. United States of America, Defendant; Federal Deposit Insurance Corporation, as successor to the rights of Home Federal Savings Bank, Plaintiff Intervenor v. United States of America, Defendant. Case No. 90-3982C. Testified in deposition on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. May 2000.

Estate of Robert H. Lurie, deceased, Ann Lurie, Executor v. Commissioner of Internal Revenue, Docket No. 22639-94 in the U.S. Tax Court. Testified at trial on whether certain trusts accumulated assets from investments without transfers for inadequate consideration by the deceased. February 1999.

Joseph K. Mitchell, et al., v. Central Investment Corporation, Case No. A9700035, Special Proceedings in the Court of Common Pleas, Hamilton County, Ohio. Testified in deposition regarding fair cash value of a minority position in stock of a Pepsi-Cola bottling company in connection with a freeze-out merger. March 1998.

Walter L. Gross, Jr. & Barbara H. Gross, Petitioners v. Commissioner of Internal Revenue Service, Respondent, No. 4460-97; Calvin C. Linnemann & Patricia G. Linnemann, Petitioners v. Commissioner of Internal Revenue Service, Respondent, No. 4469-97. Testified at trial regarding the fair market value of a minority interest in a Pepsi-Cola bottling company, which Petitioners had claimed as a gift-tax liability. November 1997.

R. J. R. Nabisco Inc. and Subsidiaries v. Commissioner, Docket No. 3796-95 in the U.S. Tax Court. Testified at trial regarding the nature and useful economic life of cigarette package design for federal income taxation purposes. February 1997.

Clinton, Inc. & Subsidiaries, Petitioner v. Commissioner of Internal Revenue, Respondent, Docket No. 9885-95 in the U.S. Tax Court. Testified in deposition regarding reasonable executive compensation pursuant to Internal Revenue Code Section 162 (a) (1). August 1996.

Fullers Jewelry, Inc., Plaintiff v. Dallas Central Appraisal District, Defendant, Case No. 94-09169-B, District Court, Dallas County, Texas, 44th Judicial District. Testified in deposition regarding the value of merchandise inventory of a retail jewelry chain for purposes of ad valorem taxation. July 1996.

American Marazzi, Inc., Plaintiff v. Dallas Central Appraisal District, Defendant, Cause number 95-07028-B, District Court, Dallas County, Texas, 44th Judicial District. Testified in deposition regarding the value of merchandise inventory of a manufacturer and distributor of ceramic tiles for purposes of ad valorem taxation. June 1996.

Terence Dean, et al. v. Dean Security, Inc. et al. Testified in binding arbitration regarding damages due to breach of contract for the sale of a security company. March 1996.

Advertiser's Dynamic Services, Co., Inc., Plaintiff v. United States of America, Defendant, Case No. 3-94-CV-2079-G, District Court, North Dallas, Texas. Testified at trial regarding the nature of contracts between a publisher and salespersons for payroll tax purposes. February 1996.

Publications

"Economic Consequences: The Real Cost of U.S. Securities Class Action Litigation," 2014, with Nikolai Caswell, Anand Goel, Sumon C. Mazumdar and Rahul Surana, issued by Institute for Legal Reform, U.S. Chamber of Commerce.

“Assessing Market Efficiency for Reliance on the Fraud-on-the-Market Doctrine after Wal-Mart and Amgen,” with Sumon C. Mazumdar and Daniel A. McLaughlin, 2014, in James Langenfeld Ed., Research in Law and Economics, Volume 26, 161-207.

“The NUA Benefit and Optimal Investment in Company Stock in 401(K) Accounts,” with Sumon C. Mazumdar, Vikram Nanda and Rahul Surana, 2009, in A. H. Chen Ed., Research in Finance, Volume 25, 203–227.

“Competition in IPO Underwriting: Time Series Evidence,” with Andrew H. Chen and Sumon C. Mazumdar, 2008, in A. H. Chen Ed., Research in Finance, Volume 24, 1–25.

“A Matrix-Based Lattice Model to Value Employee Stock Options,” with Sumon C. Mazumdar, Rahul Surana and Sanjay Unni, 2006, Journal of Derivatives 14, 9–26.

“Mean Reversion in Earnings and the Use of E/P Multiples in Corporate Valuation,” with David Denis and Atulya Sarin, 2004, Journal of Applied Finance 14, 4–10.

“Securities Class Action Settlements: An Empirical Analysis,” with Sumon C. Mazumdar and Atulya Sarin, 2003, Santa Clara Law Review 43, 1001–1033.

“Ownership Structure, Agency Costs and Dividend Policy,” with Anand M. Vijh and Randolph W. Westerfield, 2002, in A. H. Chen Ed., Research in Finance, Volume 19, 1–28.

“The Cost of Raising Preferred Equity Capital,” with Sumon C. Mazumdar and Atulya Sarin, 2002, Journal of Financial Research 25, 577–592.

“Firm Value and Marketability Discounts,” with David J. Denis, Stephen P. Ferris and Atulya Sarin, 2001, Journal of Corporation Law 27, 89–115.

“Transfer Pricing and Foreign Exchange Risk,” with Brian Becker and Jonathan Neuberger, Transfer Pricing Report, July 1999.

“Dividend Omissions and Forecasts of Future Earnings: Some Positive Evidence on Information Content of Dividends,” 1999, in A. H. Chen Ed., Research in Finance, Volume 17, 13–39.

“The Relationship Between Ownership, Financing Decisions and Firm Performance: A Signaling Model,” with Sudipto Dasgupta and Yuk-She Chan, 1998, International Economic Review 39, 723–744.

“Valuation for Smaller Capitalization Companies,” with Scott D. Hakala, 1998, in Financial Valuation: Business and Business Interests – 1998 update, Warren, Gorham & Lamant.

“Trading Behavior and the Unbiasedness of the Market Reaction to Dividend Announcements,” with Anand M. Vijh, 1995, Journal of Finance 50. (Abstract reprinted in Financial Management Collection, 1996.)

“Beyond Mere Compliance,” with Anita S. Agarwal, Mortgage Banking, April 1993, 57–61.

“Dividend Clienteles and the Information Content of Dividend Changes,” with Anand M. Vijh, 1990, Journal of Financial Economics 26, 193–219.

“The Efficient and Inefficient Media for Political Campaign Advertising,” with Roland T. Rust and George T. Haley, 1984, Journal of Advertising 13, 45–49.

“Modeling of Non-Ideal Residence Time Distribution in a Continuous Flow Stirred Tank Reactor at Zero RPM,” with D. Prasanna Rao, 1983, Indian Chemical Engineer, 24–27.

“Alternate Criteria for the Comparison of Regression Models,” with Roland T. Rust, presented in Proceedings of the Southwestern Marketing Association, Spring 1983.

Working Papers

“ESO Expensing Under the Revised FAS 123: A Practitioner’s Guide,” with Sumon C. Mazumdar, Sanjay Unni, and Anand Vijn, September 2005.

“Investment in Company Stock in 401(k) Accounts,” with Sumon C. Mazumdar, May 2005.

“The New Accounting Rules for ESO Expensing: Not Quite As Easy As 123,” with Sumon C. Mazumdar and Sanjay Unni, March 2005.

“Competition in IPO Underwriting: Time Series Evidence,” with Andrew H. Chen, Sumon C. Mazumdar and Atulya Sarin, March 2003.

“Auditor Compensation and Audit Failure: An Empirical Analysis,” February 2003.

“The Offer Yield of Preferred Stock,” with Sumon C. Mazumdar and Atulya Sarin, March 2002.

“Signaling, Agency Costs and Ownership Structure: Theory and Empirical Implications,” with Sudipto Dasgupta and Yuk–Shee Chan, mimeo, Hong Kong University of Science and Technology, 1997.

“Is it Appropriate to Use a Higher Discount Rate to Value Small Firms?” with Martin Hanan, Rick Knoll, and Mark Mitchell.

“Turnover in Equity Ownership, Risk and Return,” September 1995.

Charles River Associates

Professional History

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| 2019 – present | Charles River Associates Senior Consultant |
| 2012 – 2019 | Navigant Consulting Managing Director and Global Head of the Securities & Finance Practice |
| 1997 – 2014 | Haas School of Business, University of California, Berkeley Lecturer |
| 2011 – 2012 | AFE Consulting Founder and President |
| 1997 – 2011 | LECG Senior Managing Director and Practice Leader (2007 – 2011) Member – Executive Management Committee (2007 – 2011) Member – Management Advisory Committee (2003 – 2007) Member – Board of Directors (2001 – 2003) Managing Director (1999 – 2007) Director (1999) Affiliate (1998) Principal (1998) Senior Economist (1997) |
| 1995 – 1997 | BVS Senior Associate |
| 1988 – 1995 | University of Southern California Assistant Professor – Finance and Business Economics Award from Faculty Research & Innovation Fund, University of Southern California, 1990 |
| 1983 – 1988 | University of California, Berkeley Instructor Graduate Student Instructor <ul style="list-style-type: none"> • Graduate Fellowship, University of California, Berkeley (1988) • Earl F. Cheit Award for Outstanding Teaching, Graduate School of Business, University of California, Berkeley (1986–1987) • Outstanding Graduate Student Instructor Award, University of California, Berkeley (1986–1987) • Outstanding Graduate Student Instructor Award, University of California, Berkeley (1985–1986) • Award for Best Technical Paper published in Indian Chemical Engineer (1983) |

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Appendix 2: Documents Considered

Case Documents

1. Memorandum of Law in Support of Defendants' Motion to Dismiss the Amended Complaint with Prejudice, September 2, 2008.
2. Appendix 1 to Lead Plaintiff's Memorandum in Opposition to Defendants' Motion to Dismiss the First Amended Complaint, October 16, 2008.
3. Third Amended Complaint, ECF No. 166, March 28, 2012.
4. Defendants' Glossary of Terms, ECF No. 320, June 9, 2014.
5. Lead Plaintiff's Glossary of Terms Used in Connection with Defendants' Motions to Dismiss the Third Amended Complaint, June 9, 2014.
6. Appeal from the United States District Court for the Northern District of Ohio at Youngstown. No. 4:08-cv-00160, United States Court of Appeals, (6th Cir. 2016), July 20, 2016.
7. Memorandum of Opinion and Order, ECF No. 478, August 14, 2018.
8. Order, In re Ohio Pub. Emps. Ret. Sys., No. 18-0310, United States Court of Appeals for the Sixth Circuit, January 23, 2019.

Declarations and Expert Reports

1. Expert Report of Dr. Greg Hallman, August 16, 2012.
2. Expert Report of Mukesh Bajaj, Ph.D., December 14, 2012.
3. Declaration of Professor Steven P. Feinstein, December 16, 2016.
4. Report on Market Efficiency Professor Steven P. Feinstein, June 7, 2017.
5. Expert Report of Mukesh Bajaj, Ph.D., September 1, 2017.
6. Expert Report of Paul A. Gompers, September 1, 2017.
7. Expert Report of David I. Tabak, Ph.D., November 16, 2023.
8. Expert Report of Howard S. Shapiro, November 17, 2023.
9. Expert Report of Dr. Chudozie Okongwu, January 19, 2024.

Depositions

1. Deposition of Howard Shapiro, November 6, 2023.
2. Deposition of David I. Tabak, December 20, 2023.
3. Deposition of Howard Shapiro, January 10, 2024.

Court Opinions

1. *Basic, Inc. v. Levinson*, 485 U.S. 224 (1988).
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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

OHIO PUBLIC EMPLOYEES
RETIREMENT SYSTEM, On Behalf of Itself
and all Others Similarly Situated,

Plaintiff,

VS.

FEDERAL HOME LOAN MORTGAGE
CORPORATION a/k/a FREDDIE MAC,
RICHARD F. SYRON, PATRICIA L. COOK,
ANTHONY S. PISZEL, and EUGENE M.
McQUADE,

Defendants.

CIVIL ACTION NO. 4:08-cv-160

JUDGE BENITA Y. PEARSON

MAGISTRATE JUDGE
WILLIAM H. BAUGHMAN, JR.

DEFENDANTS' GLOSSARY OF TERMS

Per this Court’s May 16, 2014 Order, Federal Home Loan Mortgage Corporation (“Freddie Mac”), Richard F. Syron, Patricia Cook, Anthony Piszal, and Eugene McQuade hereby submit this Glossary of Terms.

SUBPRIME MORTGAGE LOAN: Loans that originating lenders classify and label as “subprime” loans upon their origination, marketing, and sale are “subprime” loans. Freddie Mac did not buy and hold in its guarantee portfolio loans classified by the originating lender as “subprime” loans upon their issuance, with the exception of a de minimus amount of Structured Securities that were backed by loans identified as being “subprime” by the original issuer.¹

That said, there is not, and there was not during the putative class period, a universally accepted definition of the term “subprime” loan that originating lenders use, or have used, when

¹ See TAC ¶ 156; see also Freddie Mac 2006 Annual Report to Stockholders (Mar. 23, 2007), ECF No. 298-2 (“2006 Annual Report”) at p. ID 12479 (“Also included in our credit guarantee portfolio are Structured Securities backed by non-agency mortgage-related securities where the underlying collateral was **identified as being subprime by the original issuer**.”) (emphasis added); see also Freddie Mac 2007 Annual Report to Stockholders (Feb. 28, 2008), ECF No. 298-3 (“2007 Annual Report”) at p. ID 12678-79 (“We estimate that approximately \$6 billion and \$3 billion of loans underlying our Structured Transactions at December 31, 2007 and 2006, respectively, were **classified as subprime mortgage loans**.”) (emphasis added).

they classify, label, market, and sell loans as “subprime” loans.² “Subprime” loans typically are originated by specialized lenders, rather than by mainstream mortgage lenders.³ As a group, these specialized subprime originators have been referred to as the “subprime channel.”⁴ Freddie Mac did not purchase and hold in its guarantee portfolio, during the relevant period, loans sold through “traditional subprime channels” of loan origination (except as noted above),⁵ and the Third Amended Complaint (“TAC”) does not allege otherwise.

RISK-LAYERED MORTGAGE LOAN: In the mortgage industry, “risk-layered mortgage loans” connote loans that have more than one characteristic associated with higher levels of credit risk.⁶ The combination of multiple higher risk characteristics associated with a loan increases the degree of credit risk presented by that loan. For example, mortgages with both high LTV ratios and lower FICO credit scores typically experience higher rates of delinquency, default, and credit losses.⁷ An article on which Plaintiff relies in the TAC discusses risk layering as it relates to the loans in Freddie Mac’s guarantee portfolio, as of the end of the second quarter of 2007, as follows: “Loans to borrowers with a FICO credit score lower than 620 make up 4% of the total [Freddie Mac guarantee] portfolio. But, significantly, loans with both original LTVs over 90% and FICO scores below 620 make up a tiny proportion of the portfolio at less than 1%.”⁸

² See Mem. of Law in Support of Freddie Mac’s Motion to Dismiss (“MB”) at 48-50 (collecting authority); 2006 Annual Report, ECF No. 298-2 at p. ID 12479; Thomas P. Lemke, Gerald T. Lins & Marie E. Picard, Mortgage-Backed Securities: Developments and Trends in the Secondary Mortgage Market § 3:6 (2013-14 ed.) (“There is no single accepted or all-encompassing definition of ‘subprime’ and subprime mortgages are not homogenous.”); SEC v. Mozilo, No. 09-cv-03994 (C.D. Cal.), Compl. ¶ 21, ECF No. 1. (referring to differing definitions of “subprime” loans, using as a cut-off loans to borrowers with FICO scores lower than either 620 or 660); MB at 17-18 (citing to documents referenced in the TAC evidencing that Freddie Mac disclosed all of the loans in its guarantee portfolio made to borrowers with FICO scores below either 620 or 660, and the TAC does not contest the accuracy of any of those disclosures); Kuriakose v. Federal Home Loan Mortg. Corp., 897 F. Supp. 2d 168, 182-83 (S.D.N.Y. 2012) (noting disclosure by Freddie Mac of all loans in its guarantee portfolio made to borrowers with FICO scores below either 620 or 660).

³ Lemke, supra, § 3:5-6.

⁴ See, e.g., Kuriakose, 897 F. Supp. 2d at 183 (referencing “traditional subprime channels”).

⁵ Id. (noting that Freddie Mac did not purchase or guarantee loans from “traditional subprime channels”).

⁶ See Conference of State Bank Supervisors, Am. Assoc. of Residential Mortg. Regulators, Guidance on Nontraditional Mortgage Product Risks (“CSBS/AARMR”) at 5, available at http://www.csbs.org/regulatory/policy/policy-guidelines/Documents/CSBS-AARMR_FINAL_GUIDANCE.pdf.

⁷ See 2007 Annual Report, ECF No. 298-3 at p. ID 12682.

⁸ Mission Critical, Mortgage Risk Magazine (Oct. 2007), ECF No. 298-40 at p. ID 13708-09 (emphasis added).

Similarly, the report published by the Financial Crisis Inquiry Commission of the United States Congress stresses that the effects of “risk layering” account for the exponential difference in the delinquency rate between the GSE (i.e., Freddie Mac and Fannie Mae) and non-GSE loans that it studied with FICO scores below 660.⁹ As the FCIC concluded, the non-GSE loans had a delinquency rate over 400% higher than the GSE loans that shared the same FICO score characteristic (i.e., 660 or below), because the non-GSE loans had many additional high-risk characteristics layered on top of the FICO score risk, while the GSE loans predominantly did not. Id. (reporting a 6.2% delinquency rate for the GSE loans with FICO scores below 660, versus a 28.3% delinquency rate for the non-GSE loans with FICO scores below 660); see also MB at 54-55. Based upon these differences in loan performance, the FCIC observed that “grouping all of these loans together,” as if they are identical or very similar, “is misleading,” given the effect that “risk-layering” has on the actual performance of such loans. See MB at 54-55 (quoting FCIC Report). For this reason, the FCIC Report concludes: “GSE mortgages with some riskier characteristics such as high loan-to-value ratios are not at all equivalent to those mortgages in securitizations labeled subprime and Alt-A by issuers.”¹⁰

SUBPRIME-LIKE LOAN: The term “subprime-like loan” is not a term of art within the mortgage industry, and it does not have a definition. Rather, it is a descriptive term that would have a different meaning depending upon the person who used that term and the context in which it was used. While there is no definition of a “subprime-like loan,” that description does connote what a “subprime-like loan” is *not*. A loan described as “subprime-like” is *not* a loan that was actually classified, labeled, and sold as a “subprime” loan by the lender that originated the loan. If it were, such a loan would not be referred to as “like” a “subprime” loan, but rather as a “subprime” loan. Generally speaking, a loan referred to as “subprime-like” might have some characteristics in common with a loan that an originating lender classified, labeled, and sold as a

⁹ See also Fin. Crisis Inquiry Comm’n, Final Report of the Nat’l Comm’n on the Causes of the Fin. & Econ. Crisis in the U.S. (Jan. 2011), ECF No. 298-60 (“FCIC Report”) at p. ID 14314-15.

¹⁰ FCIC Report, ECF No. 298-60 at p. ID 14315.

“subprime” loan through the “subprime channel,” while also possessing other attributes different from such loans.¹¹ These differences have a substantial impact on the expected and actual performance of these loans.¹²

NONTRADITIONAL MORTGAGE LOANS: The term “nontraditional mortgage loans” does not have a fixed definition in the mortgage industry. Generally speaking, nontraditional mortgage loans are different than traditional fixed interest rate mortgage loans and include, but are not limited to, interest-only mortgages loans, Alt-A mortgage loans, and payment-option adjustable rate mortgages (“ARMs”), which may also be referred to as “alternative mortgage products.”¹³ Some of these products allow borrowers to exchange lower payments during an initial period for higher payments during a later amortization period.¹⁴ During the putative class period, as Freddie Mac disclosed, it expected nontraditional or alternative mortgage products that it purchased “to default more often than traditional products” that it purchased.¹⁵ Loans classified and labeled “subprime” by the originating lender may also be regarded as nontraditional mortgage loans.¹⁶ However, many types of loans that might be referred to as nontraditional mortgage loans are not “subprime” loans, and they present relatively lower levels of credit risk than loans classified and labeled “subprime” by the originating lender and sold through the “subprime channel.”¹⁷

¹¹ See supra (section addressing “risk-layered mortgage loans” and discussing the significantly more negative performance of loans “labeled subprime and Alt-A by issuers,” on the one hand, as compared to “GSE mortgages with some riskier characteristics such as high loan-to-value ratios” or lower FICO scores, on the other hand) (quoting FCIC Report).

¹² Id.

¹³ CSBS/AARMR at 1; see also Freddie Mac Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2005 (June 28, 2006), ECF No. 298-1 (“2005 Annual Report”) at p. ID 12246, 12308; 2006 Annual Report, ECF No. 298-2 at p. ID 12449, 12479; 2007 Annual Report, ECF No. 298-3 at p. ID 12596; Freddie Mac Form 10-Q for the Quarterly Period Ended June 30, 2008 (Aug. 6, 2008), ECF No. 298-5 (“Q2 2008 10-Q”) at p. ID 12840; see infra (discussions of “Alt-A mortgage loans,” “interest-only loans,” “payment-option adjustable rate mortgage loans,” and “alternative mortgage market”).

¹⁴ See id.

¹⁵ See, e.g., 2005 Annual Report, ECF No. 298-1 at p. ID 12308.

¹⁶ See Lemke, supra, § 3:5.

¹⁷ See supra (section discussing “risk-layered mortgage loans” and discussing the significantly more negative performance of loans “labeled subprime and Alt-A by issuers,” on the one hand, as compared to “GSE

HIGH-RISK MORTGAGE LOANS: The term “high-risk mortgage loans” is not a term of art within the mortgage industry, and it does not have a fixed definition. Rather, it is a descriptive term that would have a different meaning depending upon the person who used that term and the context in which it was used. Mortgage loans with characteristics that are associated with higher levels of credit risk, such as mortgages with high LTV ratios or mortgages to borrowers who have lower credit (FICO) scores, are among the loans that would generally be regarded as giving rise to a relatively higher risk of default than loans that lack those characteristics.¹⁸ Generally speaking, the greater the amount of higher-risk credit characteristics associated with a loan, i.e., the greater the amount of “risk-layering” within a loan, the higher the risk that the loan will default.¹⁹ Examples of loans that would generally be regarded as presenting relatively higher degrees of credit risk include nontraditional (or alternative) mortgage products, such as interest-only loans, payment-option adjustable rate mortgages,²⁰ and loans originated with less documentation, such as Alt-A loans.²¹ Loans classified and labeled “subprime” by the originating lender would also be regarded as high-risk mortgage loans, as such loans generally present a high degree of credit risk. However, many types of loans that might be referred to as high-risk loans are not “subprime” loans, and they present relatively lower levels of credit risk than loans labeled and classified as “subprime” by the originating lender, and sold through the “subprime channel.”²²

mortgages with some riskier characteristics such as high loan-to-value ratios” or lower FICO scores, on the other hand) (quoting FCIC Report).

¹⁸ See, e.g., MB at 17; 2005 Annual Report, ECF No. 298-1 at p. ID 12310; 2006 Annual Report, ECF No. 298-2 at p. ID 12480; 2007 Annual Report, ECF No. 298-3 at p. ID 12681; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12901; Transcript, Freddie Mac Second Quarter 2007 Financial Results (Aug. 30, 2007), ECF No. 298-36 at p. ID 13558 (disclosing the quantity of loans in its guarantee portfolio with certain higher-risk characteristics including, inter alia, FICO scores below 620; original LTVs over 90%; the combination of both FICO scores below 620 and original LTVs over 90%).

¹⁹ See supra (discussion of “risk-layered mortgage loans”).

²⁰ See infra (discussion of “payment-option adjustable rate mortgages”).

²¹ See infra; see also 2007 Annual Report, ECF No. 298-3 at p. ID 12598.

²² See supra (section addressing “risk-layered mortgage loans,” and discussing the significantly more negative performance of loans “labeled subprime and Alt-A by issuers,” on the one hand, as compared to “GSE mortgages with some riskier characteristics such as high loan-to-value ratios” or lower FICO scores, on the other hand) (quoting FCIC Report).

ALT-A MORTGAGE LOANS: Although there is no universally accepted definition of Alt-A (short for “Alternative-A paper”) in the mortgage industry, Freddie Mac principally acquired, during the relevant period, mortgage loans originated as Alt-A from its traditional lenders that largely specialized in originating prime mortgage loans. These lenders typically originated Alt-A loans as a complementary product offering and generally followed an origination path similar to that used for their prime origination process. In determining Freddie Mac’s exposure to Alt-A loans in its guarantee portfolio, Freddie Mac classified mortgage loans as Alt-A if the lender that delivered them to Freddie Mac had classified the loans as Alt-A, or if the loans had reduced documentation requirements which indicated that the loan should be classified as Alt-A.²³

INTEREST-ONLY LOAN: In the mortgage industry, an “interest-only loan” is a mortgage loan that allows the borrower to pay only interest (either fixed-rate or adjustable-rate) for a fixed period of time before principal amortization payments are required to begin.²⁴ After the end of the interest-only period, the borrower can choose to refinance the loan, pay the principal balance in total, or begin paying the monthly scheduled principal due on the loan.²⁵ An interest-only loan is a nontraditional mortgage loan.²⁶

PAYMENT-OPTION ADJUSTABLE-RATE MORTGAGE (“ARM”): In the mortgage industry, a payment-option “ARM” is a mortgage loan that permits a variety of repayment options, including minimum, interest-only, fully amortizing 30-year and fully amortizing 15-year payments.²⁷ The minimum payment alternative for payment-option ARM loans allows the borrower to make monthly payments that may be less than the interest accrued for the period.²⁸

²³ See, e.g., 2007 Annual Report, ECF No. 298-3 at p. ID 12679; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12903.

²⁴ See, e.g., 2006 Annual Report, ECF No. 298-2 at p. ID 12479; 2007 Annual Report, ECF No. 298-3 at p. ID 12678; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12967.

²⁵ Id.

²⁶ See supra.

²⁷ See, e.g., 2006 Annual Report, ECF No. 298-2 at p. ID 12479; 2007 Annual Report, ECF No. 298-3 at p. ID 12678; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12967.

²⁸ Id.

The unpaid interest, known as negative amortization, is added to the principal balance of the loan, which increases the outstanding loan balance.²⁹

ALTERNATIVE MORTGAGE MARKET: The term “alternative mortgage market” does not have a fixed definition in the mortgage industry. Generally, the term may be used to refer to the market for alternative mortgage products, which would include products discussed herein as “nontraditional mortgage loans.”³⁰

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Respectfully submitted,

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²⁹ Id.

³⁰ See supra (discussion of “nontraditional mortgage loans”).

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CERTIFICATE OF SERVICE

I hereby certify that on June 9, 2014, a copy of the foregoing was filed electronically. Notice of this filing will be sent by operation of the Court's electronic filing system to all parties indicated on the electronic filing receipt. Parties may access this filing through the Court's system.

/s/ Hugh E. McKay
Hugh E. McKay

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Appendix 4: Market Model Description

1. To estimate Freddie Mac's excess returns on November 20, 2007 and the "capital raise dates" (November 27, 28, and 30, 2007) (collectively, the "Freddie Mac Excess Return Dates"), and to assess the statistical significance of these excess returns, I follow a standard methodology and estimate a statistical "market model" to isolate Freddie Mac's "excess" or "abnormal" returns, *i.e.*, the stock return after accounting for non-company specific factors such as market- and industry-wide factors.¹ The basic idea is to separate the effects on stock price of company-specific information from non-company-specific information. A regression analysis is used to calculate the relationship between changes in a company's security price (in this case Freddie Mac stock) and corresponding changes in the value of other variables capturing market- or industry-wide effects, such as the S&P 500, a broad market index. Then, the estimated relationship (*i.e.*, the "market model") and the actual performance of the associated variables are used to compute the model's "predicted return" for the stock.

2. The security's "excess return" (or "abnormal return") is then calculated by subtracting the predicted return from the security's observed return. The excess return measures the portion of the security's observed return that cannot be explained by contemporaneous changes in the market- or industry-wide factors captured by the model. It can be thought of as the company-specific component of the return.

3. The market model I applied here uses the S&P 500 Total Return Index as the market index to capture market-wide factors, the S&P 500 Financials Total Return Index as the broader industry index to capture general financial industry factors, and Fannie Mae to capture unique

¹ See, e.g., MacKinlay, A. Craig, 1997, "Event Studies in Economics and Finance," *Journal of Economic Literature* 35 ("MacKinlay (1997)"), pages 13-39. By using a market model to analyze excess returns, I am not offering an opinion on nor accepting that Freddie Mac stock traded in an efficient market during the Relevant Period.

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GSE-specific industry factors.

4. As discussed in the main body of this report in Section IV.A, Fannie Mae is a GSE that is the most similar company from a business perspective to Freddie Mac. As GSEs, both Freddie Mac and Fannie Mae were regulated by the U.S. Department of Housing and Urban Development (“HUD”) and the Office of Federal Housing Enterprise Oversight (“OFHEO”).² The two companies were subject to affordable housing goals set by HUD. Regulators also placed limitations on both firms regarding the terms and principal amounts of loans and securities that could be purchased and/or guaranteed.³ OFHEO, the “safety and soundness regulator” for Freddie Mac and Fannie Mae, required the companies to “maintain a mandatory target capital surplus of 30 percent over [its] minimum capital requirement, subject to certain conditions and variations” and that both companies “submit weekly reports” on capital levels.⁴ Analysts cover both GSEs in

² Fannie Mae, 2005 Annual Report, page 1. Freddie Mac 2006 Annual Report, pages 6-9. HUD had “general regulatory power over Freddie Mac, including power over new programs, affordable housing goals and fair lending.” OFEHO, a separate office within HUD with substantial independence, was the “safety and soundness regulator for Freddie Mac and Fannie Mae.” OFHEO had “authority to: issue regulations to carry out its responsibilities; conduct examinations; require reports of financial condition and operation; develop and apply critical, minimum and risk-based capital standards, including classifying the capital levels not less than quarterly; prohibit excessive executive compensation under prescribed standards; and impose temporary and final cease-and-desist orders and civil money penalties, provided certain conditions are met.”

³ See, e.g., Freddie Mac 2006 Annual Report, page 3 (“Types of Mortgages We Purchase: Our charter establishes general parameters for the terms and principal amounts of the mortgages we may purchase Within our charter parameters, the residential mortgage loans we purchase or that underlie mortgage-related securities we purchase generally fall into one of two categories: Single-Family Mortgages. Single-family mortgages are secured by one- to four-family properties. The types of single-family mortgages we purchase include 40-year, 30-year, 20-year, 15-year and 10-year fixed-rate mortgages, interest-only mortgages, adjustable-rate mortgages, or ARMs, and balloon/reset mortgages.”) and page 4 (“In response to a request by the Office of Federal Housing Enterprise Oversight, or OFHEO, we announced on August 1, 2006 that we would voluntarily limit the growth of our Retained portfolio to no more than 2.0 percent annually (and 0.5 percent quarterly on a cumulative basis), based on its carrying value as contained in our minimum capital report to OFHEO filed on July 28, 2006, which was \$710.3 billion.”)

⁴ Freddie Mac 2006 Annual Report, pages 8-9. In 2004 OFHEO “created a framework for monitoring [Freddie Mac’s] capital due to our higher operational risk, including [Freddie Mac’s] inability to produce timely financial statements in conformity with GAAP” and directed that Freddie Mac “maintain a mandatory target capital surplus of 30 percent over our minimum capital requirement, subject to certain conditions and variations;” that Freddie Mac “submit weekly reports concerning our capital levels;” and that Freddie Mac “obtain prior approval of certain capital transactions including common stock repurchases, redemption of any preferred stock or payment of dividends on preferred stock above stated contractual rates.” Fannie Mae 2005 Annual Report, page 26.

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the same reports and changed ratings on both simultaneously.⁵ Fannie Mae's stock returns can therefore be used as a proxy for the political and regulatory risk that affects both Freddie Mac and Fannie Mae.⁶

5. One of the assumptions when estimating the market model is that the volatility of excess returns remains constant over the estimation and prediction (in this case "excess return") periods.⁷ To estimate the market model's parameters, I use data for the period from August 9, 2007 to November 19, 2007, the day before November 20, 2007, the alleged corrective disclosure date. As I discuss in the main body of this report, financial market conditions shifted dramatically in the second half of 2007 and on August 9, 2007 global credit markets suddenly became ensnared in the throes of a severe and unforeseen credit crisis. This date marked the start of the global credit and liquidity crisis that eventually morphed into the Great Recession, and the start of a period of heightened market-wide volatility.⁸

6. Using the market model estimated over the estimation period to calculate the excess return, I then continue the standard procedure and assess the excess return's statistical significance to determine if the observed excess return is statistically significant relative to normal day-to-day variability reflecting vicissitudes of stock prices. That is, I examine the question of "whether the

⁵ See, e.g., Fox Pitt Kelton, "FNM and FRE: Capital Constrained – Downgrading to Underperform," November 20, 2007. See also, Merrill Lynch, "GSE stocks come into focus due to credit concerns," October 25, 2007 ("Fannie Mae (FNM; C-2-7; \$58.27) and Freddie Mac (FRE; C-2-7; \$53.24) remain under pressure as the market rotates out of stocks exposed to the deteriorating housing market. Both stocks have been viewed as good flight-to-quality stocks, as each has largely avoided the riskiest loans originated during the credit bubble and had benefited from a more favorable regulatory backdrop emanating from Washington. However, we think investors have systematically avoided or rotated out of stocks that have significant exposure to weakening housing fundamentals, putting FNM and FRE in the path of fear-induced selling.").

⁶ I note that Fannie Mae released its Q1, Q2, and Q3 2007 results on November 9, 2007. Fannie Mae News Release, "Fannie Mae Files 2007 Quarterly Reports with the SEC," November 9, 2007. Fannie Mae told investors that "[r]esults for the first three quarters of 2007 reflect worsening housing market conditions, volatility in credit markets in the third quarter, and compression in net interest yield, each of which affected net income," and that "[c]redit related expenses, including the provision for credit losses, rose \$1.6 billion, to \$2.0 billion." Fannie Mae also stated that "[w]e expect the market forces that affected our results in the first three quarters of the year to continue through the end of the year."

⁷ See, e.g., MacKinlay (1997), page 18.

⁸ See Section IV.B of this report.

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absolute value of the return is large enough so that the research can indicate with confidence that the return is relatively unusual.”⁹ The statistical significance of excess returns in this context is typically assessed by calculating a standardized measure of the size of the excess return known as a “t-statistic.” The t-statistic is equal to the excess return divided by the market model’s “standard error.” Each t-statistic corresponds to a “p-value,” which represents the probability under the assumption of the “null hypothesis,” of obtaining a result equal to or more extreme than what was actually observed. In this case, the “null” hypothesis is that the excess return is equal to zero, i.e., the stock return being analyzed was equal to the predicted return. The p-value can be thought of as how likely it is the observed difference was due to chance. The conventional level of statistical significance is a p-value of 5% or less. In some contexts, the 10% level is also considered statistically significant.

7. Using the market model results and this standard statistical framework, I examined Freddie Mac’s stock price reaction on November 20, 2007, the alleged corrective disclosure date, and the subsequent capital raise dates (i.e., the “Freddie Mac Excess Return Dates”). As shown in Table A.1 below, I find that Freddie Mac’s cumulative stock price reaction over the four Freddie Mac Excess Return Dates is statistically insignificant at conventional levels, i.e., the p-value is greater than 5%. This means that the excess return is statistically indistinguishable from zero, i.e., one cannot rule out that the price reaction occurred by chance alone.

⁹ Mark L. Mitchell and Jeffry M. Netter, “The Role of Financial Economics in Securities Fraud Cases: Applications at the Securities and Exchange Commission,” *The Business Lawyer*, February 1994.

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Table A.1: Testing for statistical significance of excess returns on November 20, 27, 28, and 30, 2007 ("Freddie Mac Excess Return Dates")**Panel A: Testing for statistical significance of Freddie Mac Excess Return Dates**

| | Freddie Mac ("FRE") Log Return | FRE Predicted Log Return | FRE Excess Log Return | T-Statistic | P-value |
|-------------------|--------------------------------------|-----------------------------|--------------------------|--------------|--------------|
| 11/20/07 | -33.82% | -15.58% | -18.24% | -13.52 | 0.000 *** |
| 11/27/07 | 4.90% | 2.22% | 2.68% | 1.99 | 0.051 * |
| 11/28/07 | 13.40% | 7.78% | 5.62% | 4.17 | 0.000 *** |
| 11/30/07 | 17.26% | 10.17% | 7.10% | 5.26 | 0.000 *** |
| CAR 4-days | | | -2.84% | -1.05 | 0.297 |

Panel B: Parameters of market model

| | |
|-------------------------|--------|
| Number of Observations | 68 |
| Adjusted R ² | 77.22% |
| Standard Error | 1.35% |

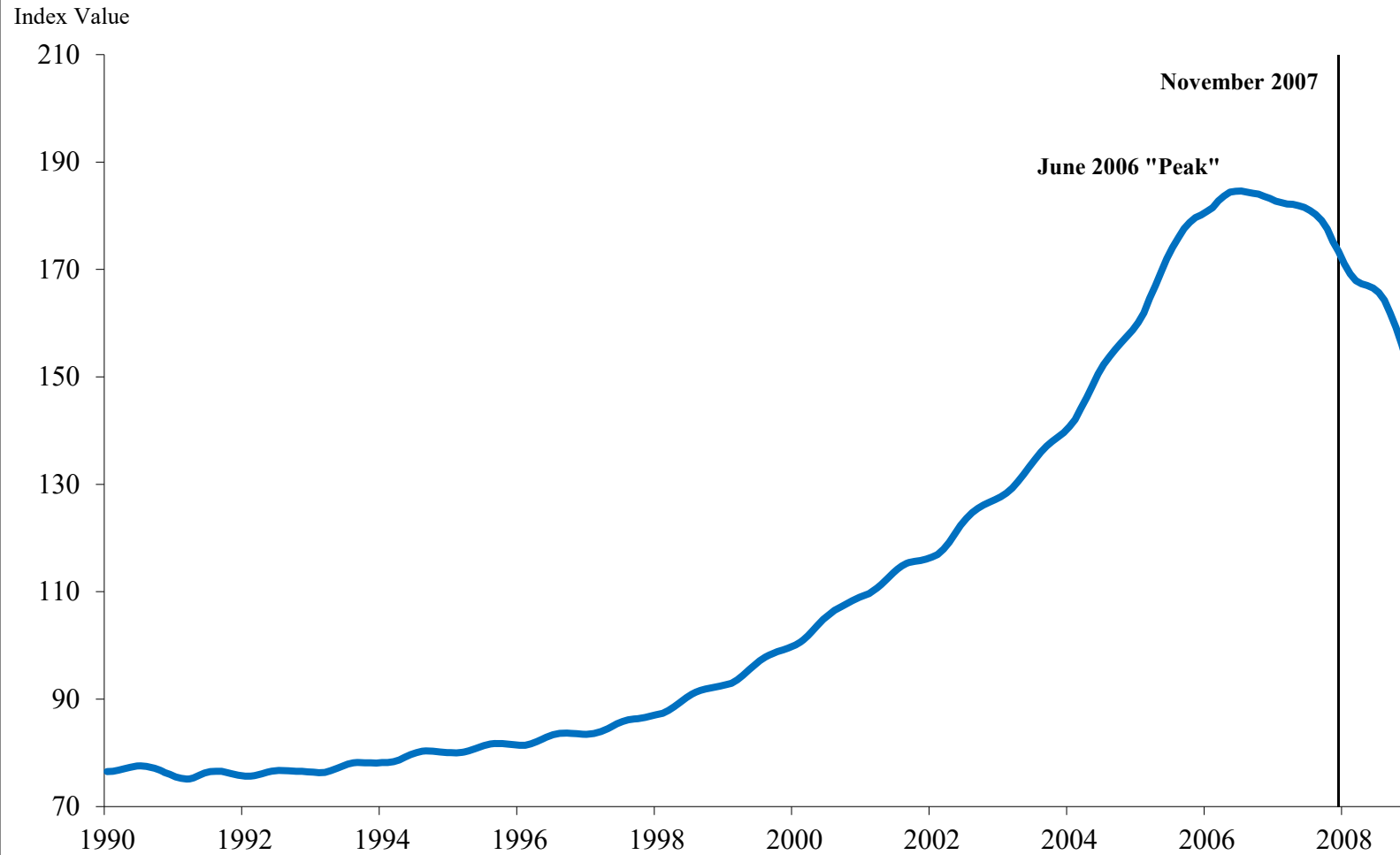
| <i>Coefficients</i> | Beta | T-statistic | P-Value |
|---|---------|-------------|-----------|
| Alpha (Intercept) | (0.005) | -3.07 | 0.003 *** |
| S&P 500 Total Return Index | 1.751 | 12.72 | 0.000 *** |
| Orthogonalized Component of the S&P Financials TR Index | 1.103 | 5.29 | 0.000 *** |
| Orthogonalized Component of Fannie Mae | 0.543 | 6.35 | 0.000 *** |

* Denotes significance at the 10% level (in a two-tailed test).

** Denotes significance at the 5% level (in a two-tailed test).

*** Denotes significance at the 1% level (in a two-tailed test).

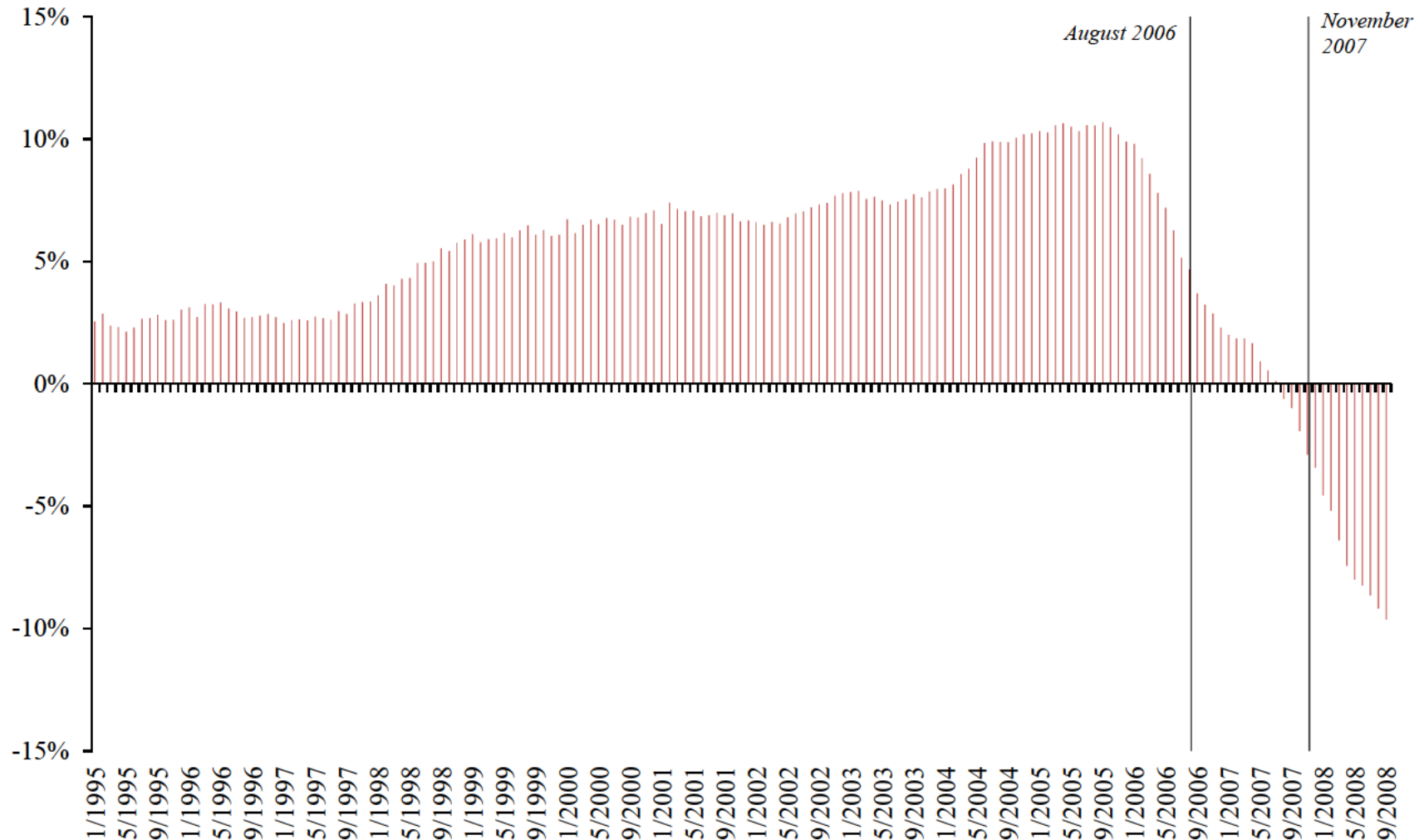
Notes and Sources: The above analysis is based on a market model estimated over August 9, 2007 to November 19, 2007, in which the daily close-to-close Freddie Mac stock logarithmic ("log") returns are regressed against an intercept term and the following variables: (1) the daily log returns of the S&P 500 Total Return Index; (2) the orthogonalized component of the S&P 500 Financials Total Return Index (i.e., the residuals from regressing the S&P 500 Financials Total Return Index log returns against the S&P 500 Total Return Index log returns); (3) the orthogonalized component of the log return on Fannie Mae stock (i.e., the residuals from the regressing the Fannie Mae common stock log returns against the log returns of the S&P 500 Total Return Index and the S&P Financials Total Return Index residuals). Fannie Mae and Freddie Mac data obtained from CRSP. Index data were obtained from Refinitiv Eikon. Freddie Mac and Fannie Mae stock returns are adjusted for dividends. The four alleged misrepresentation days in the TAC in the estimation period were excluded (August 30, September 10, 17, and November 7, 2007) from the model estimation. See Bajaj Class Cert Report, Appendix V listing alleged misrepresentation days, citing to the TAC. The t-statistic for the Cumulative Abnormal Return (CAR) was calculated as the sum of each day's abnormal (excess) log return divided by the regression standard error multiplied by the square root of the number of days (= 4).

Exhibit 1: Case Shiller "Nominal" U.S. Home Price Index (1990 - 2008)

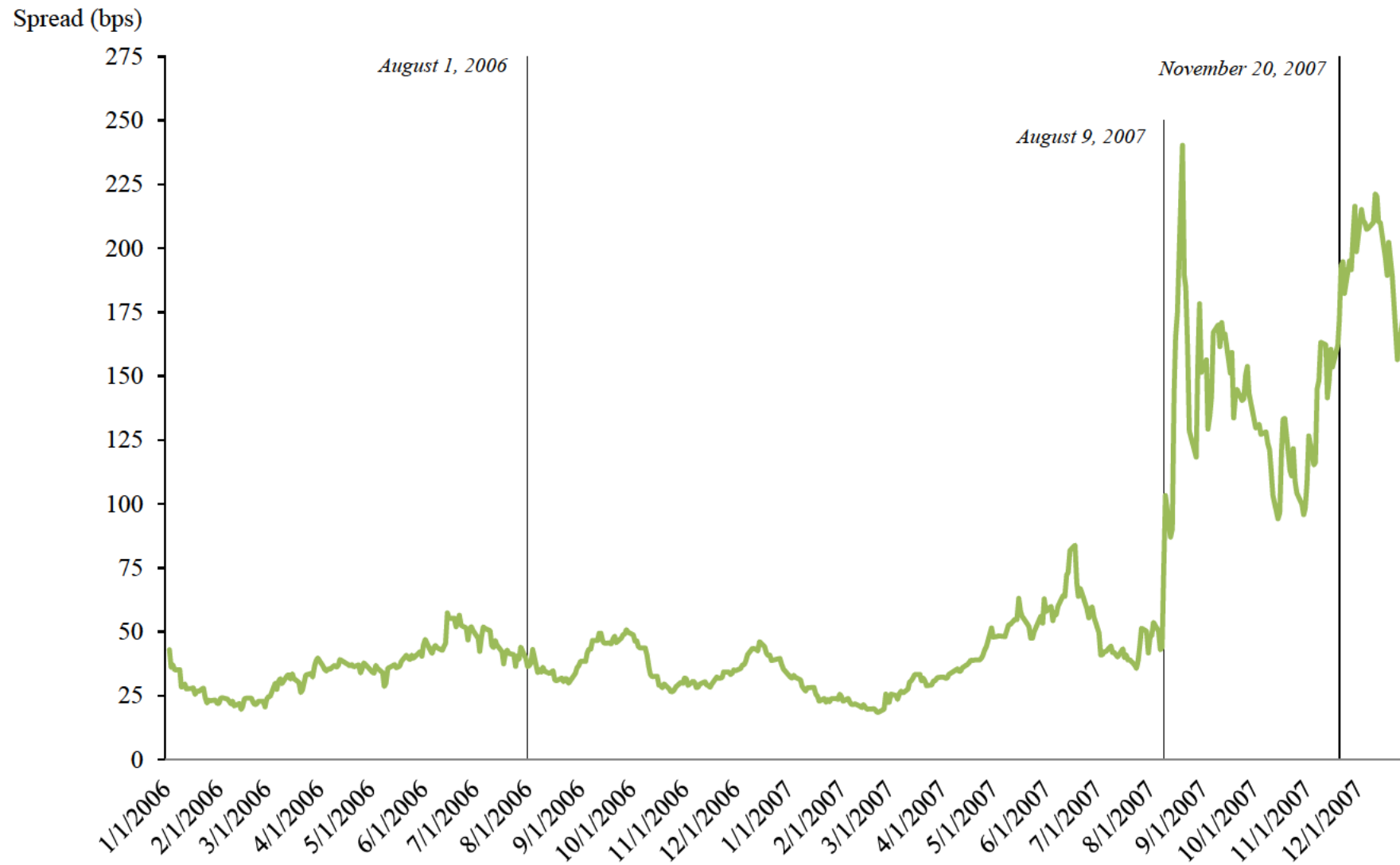
Notes and Sources: <http://www.econ.yale.edu/~shiller/data/Fig3-1.xls>

Exhibit 2: Monthly FHFA House Price Index, Seasonally Adjusted Year-Over-Year Change in Monthly Values (1995 - 2008)

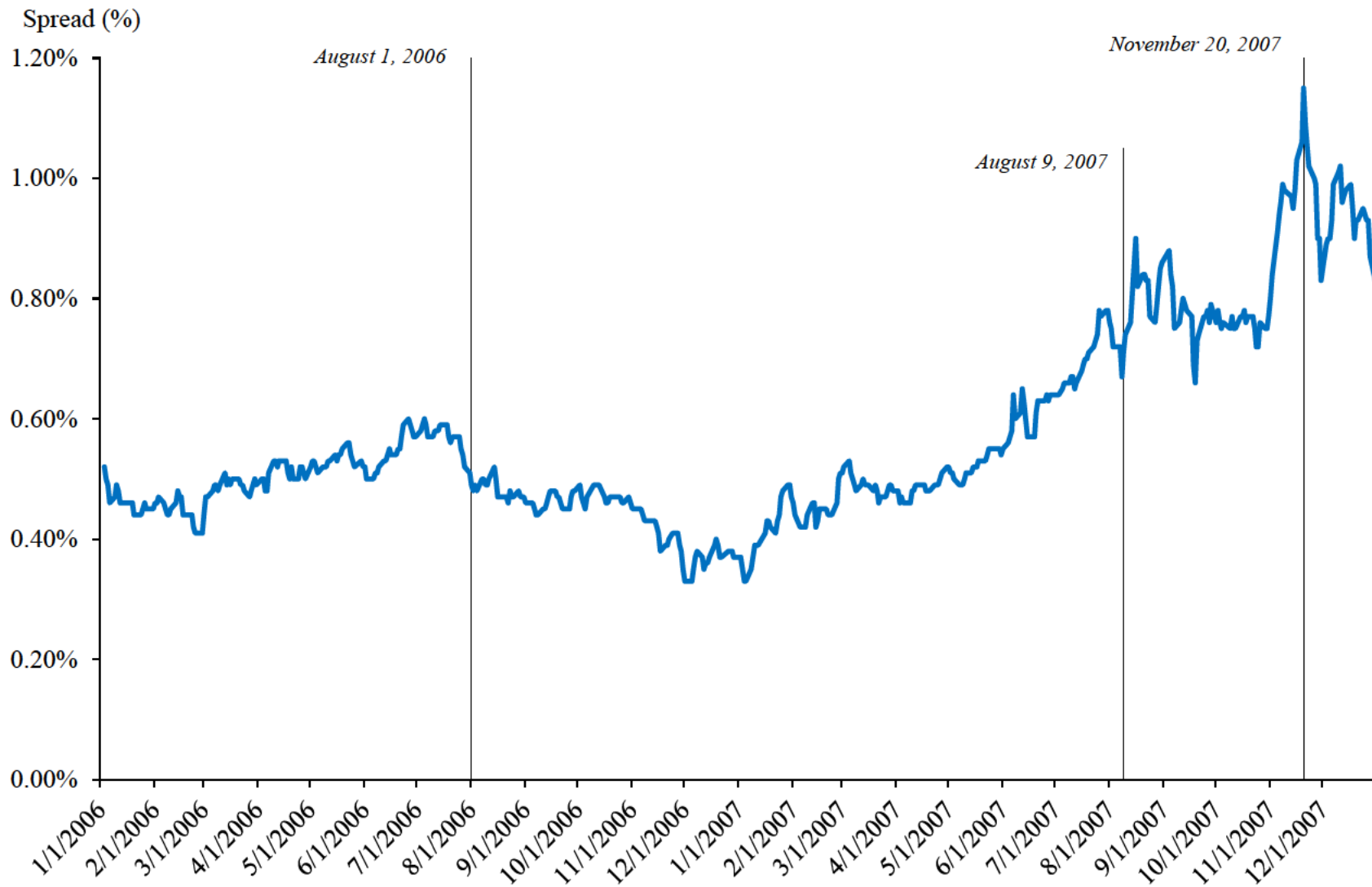
Year-Over-Year Change



Notes and Sources: Federal Housing Finance Agency (<https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx>). Year-over-year change is calculated from index values. Purchase-Only Index.

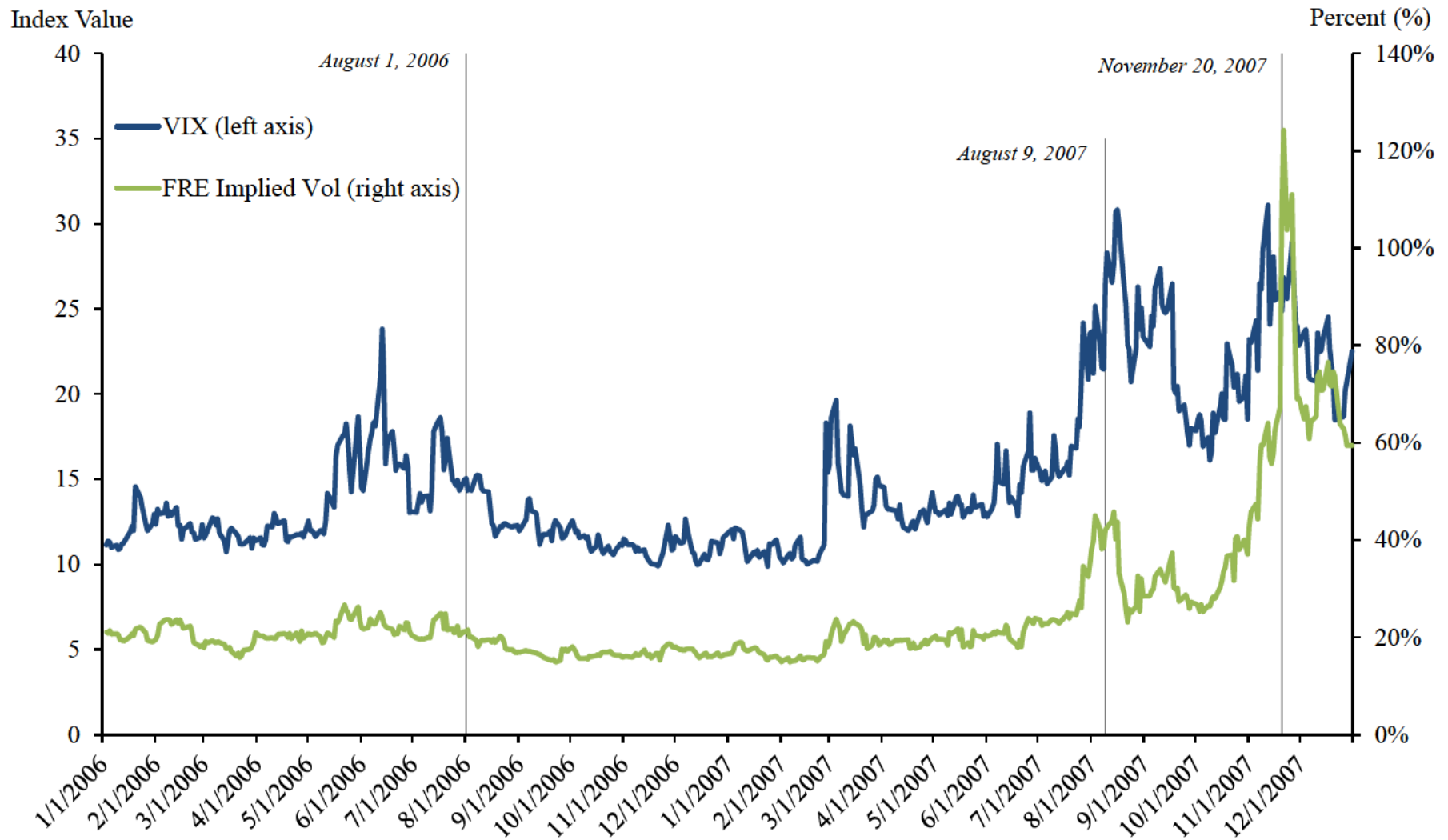
Exhibit 3: TED Spread (2006 - 2007)

Notes and Sources: Bloomberg. "Calculated by taking the BBA LIBOR USD 3 Month minus the US Generic 3 Month Yield."

Exhibit 4: Bloomberg U.S. Agency Fixed Rate MBS Average OAS (2006 - 2007)

Notes and Sources: Bloomberg. The "Bloomberg US Mortgage Backed Securities (MBS) Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage."

Exhibit 5: Chicago Board Options Exchange Volatility Index ("VIX") and Freddie Mac 30-day Implied Volatility (2006 - 2007)



Notes and Sources: VIX data obtained from Bloomberg. FRE Implied Volatility obtained from OptionMetrics. Implied volatility is computed by OptionMetrics, a well-known provider of such data, through prices of 30-day call options traded on the Company's stock.

Exhibit 6
Tabak Appendix 1 Analysis

| | | Tabak Appendix 1 | | | Corrected | | |
|------|--|-------------------|--------|--------|-------------------|--------|---------|
| | | Day of Disclosure | | | Day of Disclosure | | |
| | Company | Date | Price | Return | Date | Price | Return |
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] |
| [1] | Citigroup | 10/01/07 | 477.20 | 2.25% | 10/01/07 | 47.72 | 2.25% |
| [2] | Citigroup | 10/15/07 | 462.40 | -3.41% | 10/15/07 | 46.24 | -3.41% |
| [3] | Wachovia | 10/19/07 | 50.08 | -1.16% | 10/19/07 | 46.40 | -3.61% |
| [4] | Morgan Stanley | 11/08/07 | 53.68 | 4.86% | 11/08/07 | 53.68 | 4.86% |
| [5] | Bank of America | 11/13/07 | 46.27 | 5.21% | 11/13/07 | 46.27 | 5.21% |
| [6] | Bear Stearns | 11/14/07 | 97.49 | 0.95% | 11/14/07 | 103.27 | 2.38% |
| [7] | Washington Mutual | 12/11/07 | 19.13 | 2.90% | 12/11/07 | 17.42 | -12.37% |
| [8] | Morgan Stanley | 12/19/07 | 50.08 | 4.18% | 12/19/07 | 50.08 | 4.18% |
| [9] | Bear Stearns | 12/20/07 | 94.07 | -1.28% | 12/20/07 | 91.42 | 0.91% |
| [10] | Citigroup | 01/15/08 | 269.40 | -7.30% | 01/15/08 | 26.94 | -7.30% |
| [11] | Canadian Imperial | 01/15/08 | 35.00 | -2.87% | 01/15/08 | 68.75 | -2.14% |
| [12] | Washington Mutual | 01/18/08 | 12.46 | -6.95% | 01/18/08 | 13.55 | 8.75% |
| [13] | Bank of America | 01/22/08 | 37.39 | 3.95% | 01/22/08 | 37.39 | 3.95% |
| [14] | AMBAC Financial | 01/22/08 | 7.97 | 28.55% | 01/16/08 | 12.97 | -38.65% |
| [15] | Average of Companies, excluding Freddie Mac | | | 2.14% | | | -2.50% |

Notes and Sources:

- [a]-[d] Tabak Electronic Workpapers, Excel file "Appendix I Replication.xlsx," worksheet tab "Plaintiff Exhibit."
[f],[g] CRSP.
[14][e] Dow Jones News Service, "UPDATE: Ambac To Raise \$1B In Capital, Sees Big 4Q Losses," January 16, 2008.
[15] =AVERAGE([1]:[14]).

Exhibit 7A

Richard F. Syron Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|-----|------------------------------|-------------------|----------------|------------------|----------|----------|---------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Jun. 05, 2006 | Common Stock | Direct | A | | | | 364,171 |
| [1] | Dec. 31, 2006 | Common Stock | Direct | F | | 21,249 | \$67.90 | 342,922 |
| [2] | Mar. 29, 2007 | Common Stock | Direct | A | 107,824 | | * | 450,746 |
| [3] | Apr. 01, 2007 | Common Stock | Direct | F | | 7,979 | \$59.49 | 442,767 |
| [4] | May. 06, 2007 | Common Stock | Direct | F | | 8,193 | \$66.31 | 434,574 |
| [5] | Jun. 05, 2007 | Common Stock | Direct | F | | 12,742 | \$66.94 | 421,832 |
| [6] | Total during Relevant Period | | | | 107,824 | 50,163 | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, June 5, 2006, p.1.
 [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, December 31, 2006, p.1.
 [2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, March 29, 2007, p.1.
 [3] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, April 1, 2007, p.1.
 [4] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, May 6, 2007, p.1.
 [5] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, June 5, 2007, p.1.
 [6] = sum([2]:[6]).

- [d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
 Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
 See: <https://www.sec.gov/files/forms-3-4-5.pdf>

- [1] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [3] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on stock.
 [4] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [5] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.

- [g]
 [2] * Granted in consideration for services.

Exhibit 7B

Patricia L. Cook Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|------|-------------------------------------|-------------------|----------------|------------------|---------------|---------------|---------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Jun. 05, 2006 | | | | | | | 77,587 |
| [2] | Aug. 02, 2006 | Common Stock | Direct | F | | 1,759 | \$57.50 | 75,828 |
| [3] | Aug. 02, 2006 | Common Stock | Direct | F | | 1,946 | \$57.50 | 73,882 |
| [4] | Jan. 03, 2007 | Common Stock | Direct | S | | 4,258 | \$68.20 | 69,624 |
| [5] | Jan. 03, 2007 | Common Stock | Direct | S | | 2,847 | \$68.20 | 66,777 |
| [6] | Mar. 29, 2007 | Common Stock | Direct | A | 34,642 | | * | 101,419 |
| [7] | May. 06, 2007 | Common Stock | Direct | F | | 1,993 | \$66.31 | 99,426 |
| [8] | Jun. 05, 2007 | Common Stock | Direct | F | | 4,109 | \$66.94 | 95,317 |
| [9] | Aug. 02, 2007 | Common Stock | Direct | F | | 1,748 | \$56.61 | 93,569 |
| [10] | Aug. 02, 2007 | Common Stock | Direct | F | | 1,933 | \$56.61 | 91,636 |
| [11] | Total during Relevant Period | | | | 34,642 | 20,593 | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, June 5, 2006, p.1.
[2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2006, p.1.
[3] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2006, p.1.
[4] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, January 3, 2007, p.1.
[5] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, January 3, 2007, p.1.
[6] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, March 29, 2007, p.1.
[7] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, May 6, 2007, p.1.
[8] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, June 5, 2007, p.1.
[9] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2007, p.1.
[10] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2007, p.1.
[11] = sum([2]:[10]).

[d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
See: <https://www.sec.gov/files/forms-3-4-5.pdf>

- [2] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[3] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[4] Shares sold pursuant to a Rule 10b5-1 Plan dated October 19, 2006.
[5] Shares sold pursuant to a Rule 10b5-1 Plan dated October 19, 2006.
[7] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[8] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[9] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[10] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.

[g]
[6] * Granted in consideration for services.

Exhibit 7C

Eugene McQuade Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|-----|-------------------------------------|-------------------|----------------|------------------|---------------|---------------|---------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Jun. 05, 2006 | Common Stock | Direct | | | | | 209,456 |
| [2] | Sep. 01, 2006 | Common Stock | Direct | F | | 14,037 | \$63.61 | 195,419 |
| [3] | Mar. 29, 2007 | Common Stock | Direct | A | 71,778 | | * | 267,197 |
| [4] | May. 06, 2007 | Common Stock | Direct | F | | 5,977 | \$66.31 | 261,220 |
| [5] | Jun. 05, 2007 | Common Stock | Direct | F | | 9,290 | \$66.94 | 251,930 |
| [6] | Sep. 01, 2007 | Common Stock | Direct | F | | 13,419 | \$61.61 | 238,511 |
| [7] | Total during Relevant Period | | | | 71,778 | 42,723 | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, June 5, 2006, p.1.
 [2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, September 1, 2006, p.1.
 [3] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, March 29, 2007, p.1.
 [4] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, May 6, 2007, p.1.
 [5] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, June 5, 2007, p.1.
 [6] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, September 1, 2007, p.1.
 [7] = sum([2]:[6]).

- [d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
 Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
 See: <https://www.sec.gov/files/forms-3-4-5.pdf>

- [2] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [4] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [5] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [6] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.

- [g]
 [3] *Granted in consideration for services.

Exhibit 7D

Anthony S. Pisel Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|-----|-------------------------------------|-------------------|----------------|------------------|----------------|----------|-------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Dec. 07, 2006 | Common Stock | Direct | A | 78,940 | | * | 78,940 |
| [2] | Mar. 29, 2007 | Common Stock | Direct | A | 37,613 | | * | 116,553 |
| [3] | Total during Relevant Period | | | | 116,553 | - | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Anthony S. Pisel, December 7, 2006, p.1.
 [2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Anthony S. Pisel, March 29, 2007, p.1.
 [3] = sum([1]:[2]).
 [3] Relevant Period: August 1, 2006 to November 20, 2007.

- [d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
 Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
 See: <https://www.sec.gov/files/forms-3-4-5.pdf>

[g]

- [1] * In consideration for services.
 [2] * Granted in consideration for services.

Exhibit A.1

Total returns of Freddie Mac common stock, S&P 500 Index, S&P 500 Financials Index, and Fannie Mae common stock

August 8, 2007 to November 30, 2007

| | | | | S&P 500 | | | | | | | |
|---------|----------|-------------|--------|----------|------------|------------|--------|---------------------------|---------|------------|--------|
| | | Freddie Mac | | S&P 500 | Financials | Fannie Mae | | Logarithmic Total Returns | | | |
| | | ("FRE") | | Total | Total | ("FNM") | | S&P 500 | | | |
| Trading | | Divi- | | Return | Return | Divi- | | S&P 500 | | | |
| Date | | dend | | Index | Index | dend | | FRE | S&P 500 | Financials | FNM |
| [a] | | [b] | [c] | [d] | [e] | [f] | [g] | [h] | [i] | [j] | [k] |
| [1] | 08/08/07 | \$62.64 | \$0.00 | 2,333.24 | 616.99 | \$66.75 | \$0.00 | | | | |
| [2] | 08/09/07 | \$61.67 | \$0.00 | 2,264.50 | 593.87 | \$65.93 | \$0.00 | -1.56% | -2.99% | -3.82% | -1.24% |
| [3] | 08/10/07 | \$61.95 | \$0.00 | 2,265.36 | 593.16 | \$66.46 | \$0.00 | 0.45% | 0.04% | -0.12% | 0.80% |
| [4] | 08/13/07 | \$61.52 | \$0.00 | 2,264.58 | 588.39 | \$64.12 | \$0.00 | -0.70% | -0.03% | -0.81% | -3.58% |
| [5] | 08/14/07 | \$59.41 | \$0.00 | 2,223.71 | 574.36 | \$62.88 | \$0.00 | -3.49% | -1.82% | -2.41% | -1.95% |
| [6] | 08/15/07 | \$60.28 | \$0.00 | 2,193.40 | 568.79 | \$61.45 | \$0.00 | 1.45% | -1.37% | -0.98% | -2.30% |
| [7] | 08/16/07 | \$61.34 | \$0.00 | 2,200.61 | 588.80 | \$65.15 | \$0.00 | 1.74% | 0.33% | 3.46% | 5.85% |
| [8] | 08/17/07 | \$63.70 | \$0.00 | 2,254.68 | 610.14 | \$67.25 | \$0.00 | 3.78% | 2.43% | 3.56% | 3.17% |
| [9] | 08/20/07 | \$63.53 | \$0.00 | 2,254.07 | 605.22 | \$67.50 | \$0.00 | -0.27% | -0.03% | -0.81% | 0.37% |
| [10] | 08/21/07 | \$64.16 | \$0.00 | 2,256.52 | 608.10 | \$68.98 | \$0.00 | 0.99% | 0.11% | 0.47% | 2.17% |
| [11] | 08/22/07 | \$64.89 | \$0.00 | 2,283.09 | 613.14 | \$69.38 | \$0.00 | 1.13% | 1.17% | 0.83% | 0.58% |
| [12] | 08/23/07 | \$64.04 | \$0.00 | 2,280.68 | 610.41 | \$68.13 | \$0.00 | -1.32% | -0.11% | -0.45% | -1.82% |
| [13] | 08/24/07 | \$63.60 | \$0.00 | 2,307.22 | 613.76 | \$67.19 | \$0.00 | -0.69% | 1.16% | 0.55% | -1.39% |
| [14] | 08/27/07 | \$62.58 | \$0.00 | 2,287.62 | 605.38 | \$66.48 | \$0.00 | -1.62% | -0.85% | -1.37% | -1.06% |
| [15] | 08/28/07 | \$61.20 | \$0.00 | 2,234.02 | 585.80 | \$63.57 | \$0.00 | -2.23% | -2.37% | -3.29% | -4.48% |
| [16] | 08/29/07 | \$63.25 | \$0.00 | 2,283.58 | 596.78 | \$65.76 | \$0.00 | 3.29% | 2.19% | 1.86% | 3.39% |
| [17] | 08/30/07 | \$60.07 | \$0.00 | 2,274.16 | 590.16 | \$63.40 | \$0.00 | -5.16% | -0.41% | -1.12% | -3.65% |
| [18] | 08/31/07 | \$61.61 | \$0.00 | 2,299.71 | 599.12 | \$65.61 | \$0.00 | 2.53% | 1.12% | 1.51% | 3.43% |
| [19] | 09/04/07 | \$62.25 | \$0.00 | 2,323.83 | 606.11 | \$65.71 | \$0.00 | 1.03% | 1.04% | 1.16% | 0.15% |
| [20] | 09/05/07 | \$60.15 | \$0.00 | 2,298.16 | 594.26 | \$62.79 | \$0.00 | -3.43% | -1.11% | -1.97% | -4.55% |
| [21] | 09/06/07 | \$59.39 | \$0.00 | 2,308.35 | 593.07 | \$62.07 | \$0.00 | -1.27% | 0.44% | -0.20% | -1.15% |
| [22] | 09/07/07 | \$59.31 | \$0.00 | 2,269.32 | 584.47 | \$62.52 | \$0.00 | -0.13% | -1.70% | -1.46% | 0.72% |
| [23] | 09/10/07 | \$58.75 | \$0.00 | 2,266.51 | 583.94 | \$62.76 | \$0.00 | -0.95% | -0.12% | -0.09% | 0.38% |
| [24] | 09/11/07 | \$59.25 | \$0.00 | 2,297.41 | 591.72 | \$63.73 | \$0.00 | 0.85% | 1.35% | 1.32% | 1.53% |
| [25] | 09/12/07 | \$58.77 | \$0.00 | 2,298.14 | 590.61 | \$62.84 | \$0.00 | -0.81% | 0.03% | -0.19% | -1.41% |
| [26] | 09/13/07 | \$58.00 | \$0.50 | 2,317.63 | 600.15 | \$62.10 | \$0.00 | -0.46% | 0.84% | 1.60% | -1.18% |
| [27] | 09/14/07 | \$57.37 | \$0.00 | 2,318.11 | 599.89 | \$61.28 | \$0.00 | -1.09% | 0.02% | -0.04% | -1.33% |
| [28] | 09/17/07 | \$56.55 | \$0.00 | 2,306.25 | 595.41 | \$60.52 | \$0.00 | -1.44% | -0.51% | -0.75% | -1.25% |
| [29] | 09/18/07 | \$59.52 | \$0.00 | 2,373.63 | 621.93 | \$62.54 | \$0.00 | 5.12% | 2.88% | 4.36% | 3.28% |
| [30] | 09/19/07 | \$61.16 | \$0.00 | 2,388.15 | 625.64 | \$63.98 | \$0.00 | 2.72% | 0.61% | 0.60% | 2.28% |
| [31] | 09/20/07 | \$59.89 | \$0.00 | 2,372.61 | 614.79 | \$62.52 | \$0.00 | -2.10% | -0.65% | -1.75% | -2.31% |
| [32] | 09/21/07 | \$60.35 | \$0.00 | 2,383.55 | 616.25 | \$62.72 | \$0.00 | 0.77% | 0.46% | 0.24% | 0.32% |
| [33] | 09/24/07 | \$59.50 | \$0.00 | 2,371.03 | 608.66 | \$61.48 | \$0.00 | -1.42% | -0.53% | -1.24% | -2.00% |
| [34] | 09/25/07 | \$59.53 | \$0.00 | 2,370.26 | 606.73 | \$61.68 | \$0.00 | 0.05% | -0.03% | -0.32% | 0.32% |
| [35] | 09/26/07 | \$59.55 | \$0.00 | 2,383.53 | 610.43 | \$61.59 | \$0.00 | 0.03% | 0.56% | 0.61% | -0.15% |
| [36] | 09/27/07 | \$59.99 | \$0.00 | 2,392.92 | 615.23 | \$62.00 | \$0.00 | 0.74% | 0.39% | 0.78% | 0.66% |
| [37] | 09/28/07 | \$59.01 | \$0.00 | 2,385.72 | 612.65 | \$60.81 | \$0.00 | -1.65% | -0.30% | -0.42% | -1.94% |
| [38] | 10/01/07 | \$60.30 | \$0.00 | 2,417.44 | 625.39 | \$62.49 | \$0.00 | 2.16% | 1.32% | 2.06% | 2.73% |
| [39] | 10/02/07 | \$62.04 | \$0.00 | 2,416.83 | 630.64 | \$65.08 | \$0.00 | 2.84% | -0.03% | 0.84% | 4.06% |
| [40] | 10/03/07 | \$62.47 | \$0.00 | 2,406.30 | 631.06 | \$66.04 | \$0.00 | 0.69% | -0.44% | 0.07% | 1.46% |
| [41] | 10/04/07 | \$63.19 | \$0.00 | 2,411.41 | 632.55 | \$67.39 | \$0.00 | 1.15% | 0.21% | 0.24% | 2.02% |
| [42] | 10/05/07 | \$63.43 | \$0.00 | 2,435.16 | 640.30 | \$67.30 | \$0.00 | 0.38% | 0.98% | 1.22% | -0.13% |

Exhibit A.1

Total returns of Freddie Mac common stock, S&P 500 Index, S&P 500 Financials Index, and Fannie Mae common stock

August 8, 2007 to November 30, 2007

| Trading Date [a] | Freddie Mac ("FRE") | | S&P 500 | S&P 500 Financials | Fannie Mae ("FNM") | | Logarithmic Total Returns | | | | |
|------------------------|------------------------|----------------------|---------------------------------|---------------------------------|-----------------------|----------------------|---------------------------|---------|------------|--------|---------|
| | Price [b] | Divi- dend [c] | Total Return Index [d] | Total Return Index [e] | Price [f] | Divi- dend [g] | S&P 500 | | | | |
| | | | | | | | FRE | S&P 500 | Financials | FNM | |
| | | | | | | | | | | | |
| [h] | [i] | [j] | [k] | | | | | | | | |
| [43] | 10/08/07 | \$62.80 | \$0.00 | 2,427.33 | 635.00 | \$66.99 | \$0.00 | -1.00% | -0.32% | -0.83% | -0.46% |
| [44] | 10/09/07 | \$62.78 | \$0.00 | 2,447.03 | 640.27 | \$66.95 | \$0.00 | -0.03% | 0.81% | 0.83% | -0.06% |
| [45] | 10/10/07 | \$62.05 | \$0.00 | 2,443.02 | 634.12 | \$66.40 | \$0.00 | -1.17% | -0.16% | -0.97% | -0.82% |
| [46] | 10/11/07 | \$60.78 | \$0.00 | 2,430.55 | 632.69 | \$65.95 | \$0.00 | -2.07% | -0.51% | -0.23% | -0.68% |
| [47] | 10/12/07 | \$60.63 | \$0.00 | 2,442.12 | 632.43 | \$66.04 | \$0.00 | -0.25% | 0.48% | -0.04% | 0.14% |
| [48] | 10/15/07 | \$59.00 | \$0.00 | 2,421.67 | 620.82 | \$64.90 | \$0.00 | -2.73% | -0.84% | -1.85% | -1.74% |
| [49] | 10/16/07 | \$57.62 | \$0.00 | 2,405.76 | 609.29 | \$63.75 | \$0.00 | -2.37% | -0.66% | -1.87% | -1.79% |
| [50] | 10/17/07 | \$56.22 | \$0.00 | 2,410.22 | 608.42 | \$62.19 | \$0.00 | -2.46% | 0.19% | -0.14% | -2.48% |
| [51] | 10/18/07 | \$54.70 | \$0.00 | 2,408.46 | 601.89 | \$60.91 | \$0.00 | -2.74% | -0.07% | -1.08% | -2.08% |
| [52] | 10/19/07 | \$53.05 | \$0.00 | 2,346.78 | 584.24 | \$58.85 | \$0.00 | -3.06% | -2.59% | -2.98% | -3.44% |
| [53] | 10/22/07 | \$52.82 | \$0.00 | 2,355.74 | 589.89 | \$58.15 | \$0.00 | -0.43% | 0.38% | 0.96% | -1.20% |
| [54] | 10/23/07 | \$53.24 | \$0.00 | 2,376.47 | 593.64 | \$58.27 | \$0.00 | 0.79% | 0.88% | 0.63% | 0.21% |
| [55] | 10/24/07 | \$51.05 | \$0.00 | 2,370.71 | 589.01 | \$56.20 | \$0.00 | -4.20% | -0.24% | -0.78% | -3.62% |
| [56] | 10/25/07 | \$50.59 | \$0.00 | 2,368.43 | 585.33 | \$57.26 | \$0.00 | -0.91% | -0.10% | -0.63% | 1.87% |
| [57] | 10/26/07 | \$52.69 | \$0.00 | 2,401.07 | 600.19 | \$60.03 | \$0.00 | 4.07% | 1.37% | 2.51% | 4.72% |
| [58] | 10/29/07 | \$51.75 | \$0.00 | 2,410.33 | 600.05 | \$57.42 | \$0.50 | -1.80% | 0.38% | -0.02% | -3.58% |
| [59] | 10/30/07 | \$51.95 | \$0.00 | 2,394.81 | 596.82 | \$56.99 | \$0.00 | 0.39% | -0.65% | -0.54% | -0.75% |
| [60] | 10/31/07 | \$52.23 | \$0.00 | 2,423.67 | 601.56 | \$57.04 | \$0.00 | 0.54% | 1.20% | 0.79% | 0.09% |
| [61] | 11/01/07 | \$49.43 | \$0.00 | 2,360.21 | 574.25 | \$54.50 | \$0.00 | -5.51% | -2.65% | -4.65% | -4.56% |
| [62] | 11/02/07 | \$48.33 | \$0.00 | 2,362.21 | 564.98 | \$52.61 | \$0.00 | -2.25% | 0.08% | -1.63% | -3.53% |
| [63] | 11/05/07 | \$47.34 | \$0.00 | 2,350.69 | 557.06 | \$52.00 | \$0.00 | -2.07% | -0.49% | -1.41% | -1.17% |
| [64] | 11/06/07 | \$49.39 | \$0.00 | 2,379.05 | 566.63 | \$55.39 | \$0.00 | 4.24% | 1.20% | 1.70% | 6.32% |
| [65] | 11/07/07 | \$45.13 | \$0.00 | 2,310.41 | 538.24 | \$49.79 | \$0.00 | -9.02% | -2.93% | -5.14% | -10.66% |
| [66] | 11/08/07 | \$43.82 | \$0.00 | 2,309.18 | 540.69 | \$49.80 | \$0.00 | -2.95% | -0.05% | 0.45% | 0.02% |
| [67] | 11/09/07 | \$41.70 | \$0.00 | 2,276.26 | 541.46 | \$49.00 | \$0.00 | -4.96% | -1.44% | 0.14% | -1.62% |
| [68] | 11/12/07 | \$40.00 | \$0.00 | 2,253.53 | 542.26 | \$47.06 | \$0.00 | -4.16% | -1.00% | 0.15% | -4.04% |
| [69] | 11/13/07 | \$44.56 | \$0.00 | 2,319.86 | 568.97 | \$49.20 | \$0.00 | 10.80% | 2.90% | 4.81% | 4.45% |
| [70] | 11/14/07 | \$44.19 | \$0.00 | 2,304.06 | 565.52 | \$47.82 | \$0.00 | -0.83% | -0.68% | -0.61% | -2.84% |
| [71] | 11/15/07 | \$41.86 | \$0.00 | 2,273.73 | 548.18 | \$43.04 | \$0.00 | -5.42% | -1.33% | -3.11% | -10.53% |
| [72] | 11/16/07 | \$40.72 | \$0.00 | 2,285.67 | 544.03 | \$40.69 | \$0.00 | -2.76% | 0.52% | -0.76% | -5.61% |
| [73] | 11/19/07 | \$37.50 | \$0.00 | 2,245.81 | 527.71 | \$37.58 | \$0.00 | -8.24% | -1.76% | -3.05% | -7.95% |
| [74] | 11/20/07 | \$26.74 | \$0.00 | 2,256.02 | 520.86 | \$28.25 | \$0.00 | -33.82% | 0.45% | -1.31% | -28.54% |
| [75] | 11/21/07 | \$26.00 | \$0.00 | 2,220.21 | 509.33 | \$29.23 | \$0.00 | -2.81% | -1.60% | -2.24% | 3.41% |
| [76] | 11/23/07 | \$26.47 | \$0.00 | 2,257.95 | 525.02 | \$32.20 | \$0.00 | 1.79% | 1.69% | 3.03% | 9.68% |
| [77] | 11/26/07 | \$24.50 | \$0.00 | 2,205.49 | 503.76 | \$28.92 | \$0.00 | -7.73% | -2.35% | -4.13% | -10.74% |
| [78] | 11/27/07 | \$25.73 | \$0.00 | 2,238.52 | 517.01 | \$29.40 | \$0.00 | 4.90% | 1.49% | 2.60% | 1.65% |
| [79] | 11/28/07 | \$29.42 | \$0.00 | 2,303.17 | 543.47 | \$32.30 | \$0.00 | 13.40% | 2.85% | 4.99% | 9.41% |
| [80] | 11/29/07 | \$29.51 | \$0.00 | 2,304.43 | 539.40 | \$32.39 | \$0.00 | 0.31% | 0.05% | -0.75% | 0.28% |
| [81] | 11/30/07 | \$35.07 | \$0.00 | 2,322.34 | 555.01 | \$38.42 | \$0.00 | 17.26% | 0.77% | 2.85% | 17.07% |

Notes and Sources:

- [a] to [c] CRSP.
[d],[e] Refinitiv Eikon.
[f], [g] CRSP.
[h] $=([b]+[c])/(\text{price in [b] on a previous date per [a]})-1$.
[i] $=[d]/(\text{price in [d] on a previous date per [a]})-1$.
[j] $=[e]/(\text{price in [e] on a previous date per [a]})-1$.
[k] $=([f]+[g])/(\text{price in [f] on a previous date per [a]})-1$.



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Dr. Mukesh Bajaj is a Senior Consultant in CRA's Finance Practice. He has managed hundreds of consulting assignments involving economic and financial issues. His areas of expertise include: securities fraud, valuation of complex derivatives and intellectual property, insider trading, financial market microstructure, intangible assets, transfer pricing, interests in closely-held firms, warrants, restricted stock and other complex contingent securities, and purchase price allocation studies. He was previously Managing Director and Global Head of the Securities & Finance Practice at Navigant. Prior to that, Dr. Bajaj founded AFE Consulting and served as its President. Dr. Bajaj has also consulted on financial strategy and acquisition analysis.

Dr. Bajaj has testified in various Federal and State Courts, the Superior Court of California, the State Board of Equalization in California, the U.S. Tax Court, arbitrations, mediations and in IRS Appeals proceedings. He has also testified in Canadian and Australian courts, testified in JAMS arbitration and filed an expert report in the International Center for Settlement of Investment Disputes.

In addition to his consulting work, Dr. Bajaj has taught corporate finance, investments, and financial engineering courses in the MBA and Masters in Financial Engineering programs at the Haas School of Business at the University of California at Berkeley. Prior to his consulting practice, He was an assistant professor of finance and business economics at the University of Southern California where he taught undergraduate and graduate courses in finance. Dr. Bajaj is the recipient of several teaching awards and scholastic honors and has published several articles in leading academic and applied journals, such as *The Journal of Finance*, *The Journal of Financial Economics*, *The Journal of Financial Research*, *The Journal of Applied Finance*, *International Economic Review*, *Research in Finance*, and *Research in Law and Economics*.

Expert Testimony on Record

In re Synchronoss Technologies, Inc. Securities Litigation, Civil Action No. 17-2978 (FLW) (LHG) in the United States District Court for the District of New Jersey. Testified in deposition regarding the efficiency of the market for Synchronoss Technologies' stock. Deposition in March 2021.

In re Teva Securities Litigation, No. 3:17-cv-00558 (SRU) in the United States District Court of Connecticut. Testified in deposition regarding the efficiency of the market for Teva Pharmaceuticals' ADS, Preferred Shares, and Notes. Deposition in October 2020.

Charles River Associates

Wendy C. H. Wellin, as Special Administrator of the Estate of Keith S. Wellin and as Trustee of the Keith S. Wellin Florida Revocable Living Trust u/a/d December 11, 2001, v. Peter J. Wellin, et al. and related cases, Civil Action Nos. 2:13-cv-01831-DCN, 2:13-cv-03595-DCN, and 2:13-cv-04067-DCN in the United States District Court for the District of South Carolina. Testified in depositions regarding the equivalent value of limited partnership units. Depositions in August 2018 and November 2018.

The Tulalip Tribes, et al., v. The State of Washington, et al., Case No. 2:15-cv-00940 in the United States District Court for the District of Washington. Testified in deposition and at trial regarding the economic and governmental activities of the Tulalip tribe and the State of Washington and Snohomish County, respectively, and the relationship of such activities to sales and other taxes assessed by the State of Washington and Snohomish County. Deposition in July 2017. Trial in May 2018.

Ohio Public Employees Retirement System, On Behalf of Itself and all Others Similarly Situated, v. Federal Home Loan Mortgage Corporation a/k/a Freddie Mac, Richard F. Syron, Patricia L. Cook, Anthony S. Pizel, and Eugene M. McQuade, Civil Action No. 4:08-cv-160 in the United States District Court for the Northern District of Ohio, Eastern Division (Youngstown). Testified in depositions and a hearing concerning the efficiency of the market for Freddie Mac's common stock and the economic evidence as it related to the Plaintiff's allegations that alleged misrepresentations and omissions had an impact on the price of Freddie's Mac's stock. Hearing in April 2018. Depositions in January 2013 and September 2017.

In re Allergan, Inc. Proxy Violation Securities Litigation, C.A. 14-cv-02004 (N.D. Cal 2014). Testified in deposition on whether the common stock of Allergan Inc. traded in an efficient market during the Class Period and whether damages in the action are subject to a common formula that can be applied Class-wide (December 2016). Also testified in deposition on the economic materiality of alleged non-public information and damages allegedly caused by insider trading on this information (July 2017). Depositions in December 2016 and July 2017.

OpenGate Capital, LLC, et al., v. Thermo Fisher Scientific Inc., Civil No. 13-475-GMS in the United States District Court for the District of Delaware. Testified in deposition regarding damages allegedly caused by claims of fraudulent misrepresentation in connection with the purchase of a division of Thermo Fisher by OpenGate. Deposition in November 2015.

Continental Industries Group, Inc. v. FTS International Services, LLC, et al., Case Nos. 12-CV-05599 and 12-CV-06966 in the United States District Court, Southern District of New York. Testified in deposition and trial on economic damages resulting from the alleged breaches of two supply agreements between the Plaintiff and Defendants. Deposition in October 2014. Trial in October 2015.

In re: UBS Financial Services, Inc. of Puerto Rico Securities Litigation, Civil Case No.: 3:12-cv-01663-CCC, United States District Court for the District of Puerto Rico. Testified in deposition on economic issues related to certain Puerto Rico closed-end funds for class certification purposes. Deposition in September 2015.

In the Matter of the Arbitration between Offshore Exploration and Production LLC, Claimant/Seller, v. Korea National Oil Corporation and Ecopetrol, S.A., Respondents/Purchasers, ICDR Case No. 50 198 T 00825 1 in the International Centre for Dispute Resolution. Testified in arbitration proceedings on the calculation of prejudgment interest related to payments Claimant/Seller asserted should have been made pursuant to an escrow agreement between Claimant/Seller and Respondents/Purchasers. Arbitration in February 2014.

Sekisui America Corporation and Sekisui Medical Co., Ltd. v. Richard and Mary Louise Trudel-Hart, Case No. 12-CIV-03479 in the United States District Court, Southern District of New York. Testified in deposition on damages in an action alleging breach of contract arising out of the sale of a medical diagnostics company. Deposition in September 2013.

Securities and Exchange Commission v. Manouchehr Moshayedi, Case No. 12CV-01179-JVS-JPR in the United States District Court for the Central District of California. Testified in deposition regarding allegations by the SEC of insider trading against the founder and former CEO of STEC, a maker of custom memory solutions. Deposition in August 2013.

In re American International Group, Inc. 2008 Securities Litigation, Master File No. 08-CV-4772-LTS in the United States District Court, Southern District of New York. Testified in depositions and in an evidentiary hearing on market efficiency at class certification stage in a securities fraud class action alleging that Defendants materially misstated the extent to which AIG had accumulated exposure to the subprime mortgage market through its securities lending program and its credit default swap ("CDS") portfolio. Depositions in November 2011 and March 2012. Evidentiary Hearing in April 2013.

Securities and Exchange Commission v. Fabrice Tourre, Case No. 10-CV-3229 (KBF) in the United States District Court, Southern District of New York. Testified in deposition on the economic materiality of the nondisclosure of certain hedge fund positions with respect to a particular synthetic ABS CDO. Deposition in February 2013.

Cora E. Bennett v. Sprint Nextel Corporation, Gary D. Forsee, Paul N. Saleh and William G. Arendt, Case No. 09-CV-2122 EFM/KMH in the United States District Court for the District of Kansas. In the class-certification stage of a securities fraud class action, testified in deposition regarding the economic evidence supporting the claim that Sprint bonds traded in efficient markets throughout the Class Period. Deposition in June 2012.

State of New Jersey, Department of Treasury, Division of Investment, on behalf of Common Pension Fund A. v. Merrill Lynch & Co. and Bank of America Corp., Case No. L-3855-09 in the Superior Court of New Jersey. Testified in deposition on the materiality of accounting allegations, loss causation and damages calculations in connection with transactions involving the purchase and subsequent conversion of a convertible preferred security to common stock. Deposition in May 2012.

In re Richard Kirby v Centro Properties Ltd & Ors (VID 326 of 2008), *Richard Kirby v Centro Retail Ltd & Ors* (VID 327 of 2008), and *Nicholas Stott v Pricewaterhouse Securities Ltd* (VID 1028 of 2010), in the Federal Court of Australia. In a pair of securities class action disputes in Australia, testified at trial on alleged disclosure deficiencies of two Australian REITs in connection with certain short-term and long-term debts and the effect of those disclosures on the prices of the REITs' two stapled securities, as well as on the condition of the global credit market during the class period. Trial in May 2012.

In re Lehman Brothers Securities and ERISA Litigation, Case No. 09-MD-2017 (LAK) in United States District Court, Southern District of New York. Testified in deposition on the market for structured products and the market's general awareness of credit risks associated with structured finance products in the class-certification stage of a securities fraud class action alleging materially false and misleading statements and omissions in the offering documents of principal-protected notes. Deposition in April 2012.

In re International Textile Group Merger Litigation, C.A. No. 2009-CP-23-3346 in the Court of Common Pleas for the State of South Carolina, County of Greenville. Testified in deposition on damages and loss causation for class action and derivatives suits arising from a merger. Deposition in April 2012.

Bank of America National Association, and Banc of America Securities LLC v. Bear Stearns Asset Management Inc., Ralph Cioffi, Matthew Tannin, and Raymond McGarrigal, Case No. 1:08-cv-0265-AJN in the United States District Court, Southern District of New York. Testified in deposition on damages related to a securitization transaction and the Defendants' alleged failure to disclose the financial condition of their hedge funds. Deposition in March 2012.

Between: Howard Green and Anne Bell, and Canadian Imperial Bank of Commerce, Gerald McCaughey, Tom Woods, Brian G. Shaw, And Ken Kilgour, No. CV-08-00359335-0000, Ontario Superior Court of Justice. Testified in deposition on loss causation in proceedings under the Class Proceedings Act, 1992 alleging that Defendants made various misrepresentations regarding CIBC's CDO exposure and the extent of impairment of CIBC's CDO positions. Deposition in December 2011.

In re Tronox Inc. Securities Litigation, No. 09 Civ. 06220 (SAS), United States District Court, Southern District of New York. Testified in deposition on market efficiency at class certification stage in a securities fraud class action alleging that Defendants materially misstated the extent of legacy environmental liabilities. Deposition in December 2011.

In re Federal Home Loan Mortgage Corp. (Freddie Mac) Securities Litigation, Case No. 1:09-MD-2072 in the United States District Court, Southern District of New York. (Appeal denied by United States Court of Appeals for the Second Circuit, May 31, 2012.) Testified in deposition and hearing before the Court on market efficiency at class certification stage in a securities fraud class action alleging misrepresentations concerning Freddie Mac's capitalization and credit risk exposure. Depositions in August 2011 and November 2011. Court hearing in November and December 2011.

Estate of John F. Koons, III v. Commissioner of Internal Revenue, Docket Nos. 19771-09 and 19772-09, in the United States Tax Court. Testified at trial regarding the valuation of certain membership interests in a limited corporation. March 2011.

Charles River Associates

In Re Altria Group, Inc. v. United States of America, Case No. 1:06-cv-09430-RJH in the United States District Court, Southern District of New York. Testified in deposition and at trial regarding economic issues affecting tax treatment of certain leveraged lease transactions. Deposition in December 2007. Trial in June-July 2009.

Madison Tyler Holdings, LLC, et al., Claimants v. Financial Asset Trading & Technology of California, LLC, et al., Respondents; Financial Asset Trading & Technology of California, et al., Cross-Claimants, v. Madison Tyler Holdings, LLC, et al., Cross-Respondents; and related arbitration *Madison Tyler Holdings, a Delaware Limited Liability Company, et al., Counter-Claimants and Respondents v. Rajashree Karwa, an individual, Counter-Respondent and Claimant*. Arbitration Before JAMS, JAMS Ref. No. 1220038462. Testified in deposition on economic analysis of source of value creation in algorithmic trading strategies. June 2009.

Lawrence E. Jaffe Pension Plan, On Behalf of Itself and All Others Similarly Situated, v. Household International, Inc., et al., Case No. 02-C-5893 in the United States District Court, Northern District of Illinois, Eastern Division. Testified in deposition and at trial on loss causation and damages in a securities class action alleging securities fraud arising from purported accounting irregularities and predatory lending practices to subprime borrowers. Deposition in March 2008. Trial in May 2009.

Guerrero Family Trust, Carmen De Leon Guerrero, Jose T. Tenorio Trust, Estate of Santiago C. Tenorio, Juan T. Guerrero, Jesus T. Guerrero, and AJT Trust, v. Kinki Nippon Tourist Co. LTD, Saipan Hotel Corporation, Pacific Development Inc., Pedro J.L. Igitol, in his official capacity of Secretary of Saipan Hotel Corporation, Morgan Stanley Japan Limited, Marianas Holdings, LLC, and K.K. ING Karuizawa Training Institute, Civil Action No. 04-0574D in the Superior Court of the Commonwealth of the Northern Mariana Islands. Testified in deposition on damages arising from alleged abuse of fiduciary duty and dilution of minority shareholders' stock holding. July 2008.

In the Matter of David A. Finnerty, et al., Administrative Proceeding, File No. 3-11893, Before the Securities and Exchange Commission. Testified in trial regarding the trading patterns of certain NYSE specialists in connection with alleged violations of priority rules and securities laws. February and March 2008.

In Re NYSE Specialists Securities Litigation, Master File No. 03 Civ. 8264 (RWS) in the United States District Court, Southern District of New York. Testified in deposition on class certification issues relating to alleged trading-rule violations by New York Stock Exchange specialist firms. November 2007.

Theo Bullmore and Phillip S. Stenger, as Joint Official Liquidators of Beacon Hill Master Ltd. (In Official Liquidation), Plaintiffs v. Ernst & Young Cayman Islands, Ernst & Young LLP, Beacon Hill, Asset Management, LLC, John D. Barry, Thomas Daniels, John Irwin, Mark Miszkiewicz, and ATC Fund Services (Cayman) Limited f/k/a ATC Fund Administrators (Cayman) Limited, Defendants, Index No.: 104314/05 in the Supreme Court of the State of New York, County of New York. Testified in deposition on the causation and alleged damages experienced by the Beacon Hill Master Fund caused by an alleged improper audit by Ernst & Young Cayman Islands. September 2007.

Charles River Associates

Sterling Savings Association and Sterling Financial Corporation v. United States of America, Defendant, Case No. 95-829C in the United States Court of Federal Claims. Testified in deposition and at trial on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. Depositions in June 2002 and May 2004. Trial in July 2007.

Adelphia Communications Corp., Plaintiff v. Deloitte & Touche LLP, (Defendant) v. John Rigas, Timothy Rigas, Michael Rigas and James Rigas (Additional Defendants), in the Court of Common Pleas, Philadelphia County. Testified in deposition on loss causation and damages issues related to alleged improper conduct by auditor. May 2007.

David S. and Malia A. Litman v. United States of America, Case No. 05-956T; *Robert B. and Michelle S. Diener v. United States of America*, Case No. 05-971T; *Hotels.com Inc. and Subsidiaries (f/k/a Hotel Reservations Network, Inc.) v. United States of America*, Case No. 06-285T. Judge Christine O.C. Miller in the United States Court of Federal Claims. Testified in deposition and at trial on valuation of 9.9 million shares of stock issued to certain former officers of Hotels.com for tax purposes. Deposition in July 2006. Trial in May 2007

Jane Z. Astleford, Donor, Petitioner v. Commissioner of the Internal Revenue, Respondent, Docket No 4342-06 in the U.S. Tax Court. Testified at trial on value of certain interests in a limited partnership. March 2007.

United States of America v. Sanjay Kumar and Stephen Richards, 04-CR-0846 (ILG), in the United States District Court, Eastern District of New York. Testified at trial on loss causation and damages issues in criminal securities fraud matter in which defendants pleaded guilty to improper revenue recognition related accounting irregularities. October 2006.

The Procter and Gamble Company and Subsidiaries & Proctor and Gamble FSC (Barbados) vs. The United States of America, Case number 1:05cv355 in United States District Court for the Southern District of Ohio, Western Division. Testified in deposition on fair market value of certain technologies donated by Proctor and Gamble to various entities in connection with a tax dispute. September 2006.

United States of America v. Richard Volpe, Indictment S1 05 Cr. 390 (SHS) in the United States District Court, Southern District of New York. Testified at trial on liability issues in criminal securities fraud matter alleging illegal trading by certain New York Stock Exchange specialists. August 2006.

United States of America v. Robert Scavone, Indictment S1 05 Cr. 390 (SHS) in the United States District Court, Southern District of New York. Testified at trial on liability issues in criminal securities fraud matter alleging illegal trading by certain New York Stock Exchange specialists. July 2006.

United States of America v. Michael Hayward and Michael Stern, Indictment S1 05 Cr. 390 (SHS) in the United States District Court, Southern District of New York. Testified at trial on liability issues in criminal securities fraud matter alleging illegal trading by certain New York Stock Exchange specialists. July 2006.

Commonwealth Holdings, Inc., Profit Sharing Plan & Trust, James T. Waddill, IV et al. v. Salomon Smith Barney, Inc. and John Henry Spatz, in a hearing before NASD. Testified on loss causation and damages aspects of Plaintiffs' claims arising from alleged securities fraud. September 2005.

Charles River Associates

Messrs. Robert, Charles and John Switzer et al. v. Deutsche Bank et al., in a hearing before NASD. Testified on liability and damages aspects of Plaintiffs' damage claims arising from alleged unsuitable investments in certain leveraged debt obligations. June 2005.

IDT Corp. v Telfonica S.A. et al., Case No. 01 CV 471 in the United States District Court for New Jersey. Testified in deposition on liability and loss causation aspects in a claim of alleged securities fraud. April 2005.

Sherwin I. Ray et al. v. Citigroup Global Markets, Inc. f/k/a Salomon Smith Barney, Inc., Citigroup, Inc. and John Henry Spatz, Case No. 03C3157 in the United States District Court for the Northern District of Illinois, Eastern Division. Testified in deposition on liability and loss causation in a claim of alleged securities fraud. March 2005.

American National Bank and Trust Company of Chicago, as Trustee f/b/o Emerald Investments LP, and Emerald Investments LP, an Illinois Partnership v. Allmerica Financial Life Insurance and Annuity Company. Testified in deposition on certain liability aspects in a breach of contracts claim involving certain mutual fund trading strategies. January 2005.

In re WorldCom, Inc. ERISA Litigation, Master File No. 02 Civ. 4816 (DLC) in the United States District Court, Southern District of New York. Testified in deposition on liability aspects of Plaintiffs' damage claims in an ERISA class action. January 2005.

Xilinx Inc. and Subsidiaries v. Commissioner of Internal Revenue Service, Docket Nos. 004142-01 and 00702-03. Testified in U.S. Tax Court on whether grant date value, or certain spread upon exercise, of employee stock options should be considered part of cost sharing pool in a cost sharing arrangement between Xilinx, Inc. and its Irish affiliate. Trial in July 2004. Submitted affidavit in connection with motion to dismiss in June 2002.

Maxtor Corporation v. Koninklijke Philips Electronics N.V., Philips Semiconductors B.V., Philips Semiconductor International B.V., Philips Electronics North America Corporation, Philips Semiconductors, Inc., Philips Semiconductor Manufacturing, Inc., Philips France, Philips Japan, Ltd., and Does 1 through 25, Case No. CV 808650 in the Superior Court of the State of California, County of Santa Clara. Testified in deposition on damages analysis in connection with alleged design failure of a chip used in manufacturing computer hard drives. March 2004.

Mid-Continent Federal Savings Bank v. United States of America, Defendant, Case No. 95-472C in the United States Court of Federal Claims. Testified in deposition and at trial in Court of Federal Claims on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. Deposition in April 2002. Trial in July 2003.

Robert F. Flood v. Bessemer Trust Company, N.A.; Robert G. Vanneman; and Does 1-25 and Stephen Gorosh v. same defendants. Testified in deposition on alleged damages due to failure to diversify. November 2002.

Christine P. Rales, Plaintiff v. Steven M. Rales, Defendant, Civil Action No. 02DR166-D in the Superior Court of District of Columbia. Testified in deposition on the fair market value of a block of 19.67 million shares of common stock of Danaher Corporation held by Stephen M. Rales. February 2002.

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American National Bank and Trust Company of Chicago, as Trustee f/b/o Emerald Investments LP, and Emerald Investments LP, an Illinois Partnership v. AXA Client Solutions, LLC, The Equitable Life Assurance Society of the United States, and AXA Financial, Inc., Case No. 00 C 6786. Testified in deposition on damages due to alleged breach of contract involving certain mutual fund trading strategies. May 2002.

Statewide Savings Bank, S.L.A., Plaintiff v. United States of America, Defendant, Case No. 95-779C in the United States Court of Federal Claims. Testified in deposition on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. February 2002.

Charles T. McCord and Mary S. McCord, Donors, Petitioners v. Commissioner of Internal Revenue, Respondent, Docket No 7048-00 in the U.S. Tax Court. Testified at trial on value of several interests in a limited partnership. May 2001.

Estate of Elma Middleton Dailey, Deceased, K. Robert Dailey, II, Executor, Petitioner v. Commissioner of Internal Revenue, Respondent, Docket Nos 6251-00 and 6262-00 in the U.S. Tax Court. Testified at trial on value of several interests in a limited partnership. May 2001.

John G. Balletto v. Xoom.com, Inc., Case No. 306798 in the Superior Court of California, San Francisco County. Testified in deposition and at trial relating to damages due to alleged breach of contract. January 2001. Deposition in January 2001. Trial in March 2001.

Edison International (1585456), Mission First Financial (1431482), Edison Capital (1417993), Edison Funding Company (1417994), Renewable Energy Capital Company (0715920), Mission Funding Epsilon (1426267) v. California Franchise Tax Board. Testified before the State Board of Equalization on whether Mission First Financial and its parent company SCEcorp formed a unitary business for tax purposes during 1988 to 1990. December 2000.

Framatome Connectors USA Holdings, Inc. and Subsidiaries, et al. v. Commissioner of Internal Revenue Service, Docket No. 5030-98, 9160-99, 118 T.C. 32 (2002), aff'd, 108 Fed. Appx. 683, (2004). Testified in trial on whether Burndy Japan was a controlled foreign corporation of the petitioner for the years 1988, 1989 and 1992 under section 957(a) (2) of the Internal Revenue Code. October 2000.

Barry G. Hittner, Receiver of American Universal Insurance Company v. Sequa Corporation, et al., M.D.L. No. 972, C.A. No. 1:92-512. Testified in deposition on the value of a \$50 million note backed by certain real estate. June 2000.

Estate of Richie C. Heck, Deceased, Gary Heck, Special Administrator, Plaintiff v. Commissioner of Internal Revenue Service, Defendant. Docket No. 11619-99 in the U.S. Tax Court. Testified at trial on the valuation of a minority interest in F. Korbel & Bros., Inc. June 2000.

American Heritage Bancorp, Plaintiff v. United States of America, Defendant; Federal Deposit Insurance Corporation, as successor to the rights of Home Federal Savings Bank, Plaintiff Intervenor v. United States of America, Defendant. Case No. 90-3982C. Testified in deposition on damages due to alleged breach of contract as a result of Financial Institutions Reform and Recovery Act of 1989. May 2000.

Estate of Robert H. Lurie, deceased, Ann Lurie, Executor v. Commissioner of Internal Revenue, Docket No. 22639-94 in the U.S. Tax Court. Testified at trial on whether certain trusts accumulated assets from investments without transfers for inadequate consideration by the deceased. February 1999.

Joseph K. Mitchell, et al., v. Central Investment Corporation, Case No. A9700035, Special Proceedings in the Court of Common Pleas, Hamilton County, Ohio. Testified in deposition regarding fair cash value of a minority position in stock of a Pepsi-Cola bottling company in connection with a freeze-out merger. March 1998.

Walter L. Gross, Jr. & Barbara H. Gross, Petitioners v. Commissioner of Internal Revenue Service, Respondent, No. 4460-97; Calvin C. Linnemann & Patricia G. Linnemann, Petitioners v. Commissioner of Internal Revenue Service, Respondent, No. 4469-97. Testified at trial regarding the fair market value of a minority interest in a Pepsi-Cola bottling company, which Petitioners had claimed as a gift-tax liability. November 1997.

R. J. R. Nabisco Inc. and Subsidiaries v. Commissioner, Docket No. 3796-95 in the U.S. Tax Court. Testified at trial regarding the nature and useful economic life of cigarette package design for federal income taxation purposes. February 1997.

Clinton, Inc. & Subsidiaries, Petitioner v. Commissioner of Internal Revenue, Respondent, Docket No. 9885-95 in the U.S. Tax Court. Testified in deposition regarding reasonable executive compensation pursuant to Internal Revenue Code Section 162 (a) (1). August 1996.

Fullers Jewelry, Inc., Plaintiff v. Dallas Central Appraisal District, Defendant, Case No. 94-09169-B, District Court, Dallas County, Texas, 44th Judicial District. Testified in deposition regarding the value of merchandise inventory of a retail jewelry chain for purposes of ad valorem taxation. July 1996.

American Marazzi, Inc., Plaintiff v. Dallas Central Appraisal District, Defendant, Cause number 95-07028-B, District Court, Dallas County, Texas, 44th Judicial District. Testified in deposition regarding the value of merchandise inventory of a manufacturer and distributor of ceramic tiles for purposes of ad valorem taxation. June 1996.

Terence Dean, et al. v. Dean Security, Inc. et al. Testified in binding arbitration regarding damages due to breach of contract for the sale of a security company. March 1996.

Advertiser's Dynamic Services, Co., Inc., Plaintiff v. United States of America, Defendant, Case No. 3-94-CV-2079-G, District Court, North Dallas, Texas. Testified at trial regarding the nature of contracts between a publisher and salespersons for payroll tax purposes. February 1996.

Publications

"Economic Consequences: The Real Cost of U.S. Securities Class Action Litigation," 2014, with Nikolai Caswell, Anand Goel, Sumon C. Mazumdar and Rahul Surana, issued by Institute for Legal Reform, U.S. Chamber of Commerce.

“Assessing Market Efficiency for Reliance on the Fraud-on-the-Market Doctrine after Wal-Mart and Amgen,” with Sumon C. Mazumdar and Daniel A. McLaughlin, 2014, in James Langenfeld Ed., Research in Law and Economics, Volume 26, 161-207.

“The NUA Benefit and Optimal Investment in Company Stock in 401(K) Accounts,” with Sumon C. Mazumdar, Vikram Nanda and Rahul Surana, 2009, in A. H. Chen Ed., Research in Finance, Volume 25, 203–227.

“Competition in IPO Underwriting: Time Series Evidence,” with Andrew H. Chen and Sumon C. Mazumdar, 2008, in A. H. Chen Ed., Research in Finance, Volume 24, 1–25.

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“Mean Reversion in Earnings and the Use of E/P Multiples in Corporate Valuation,” with David Denis and Atulya Sarin, 2004, Journal of Applied Finance 14, 4–10.

“Securities Class Action Settlements: An Empirical Analysis,” with Sumon C. Mazumdar and Atulya Sarin, 2003, Santa Clara Law Review 43, 1001–1033.

“Ownership Structure, Agency Costs and Dividend Policy,” with Anand M. Vijh and Randolph W. Westerfield, 2002, in A. H. Chen Ed., Research in Finance, Volume 19, 1–28.

“The Cost of Raising Preferred Equity Capital,” with Sumon C. Mazumdar and Atulya Sarin, 2002, Journal of Financial Research 25, 577–592.

“Firm Value and Marketability Discounts,” with David J. Denis, Stephen P. Ferris and Atulya Sarin, 2001, Journal of Corporation Law 27, 89–115.

“Transfer Pricing and Foreign Exchange Risk,” with Brian Becker and Jonathan Neuberger, Transfer Pricing Report, July 1999.

“Dividend Omissions and Forecasts of Future Earnings: Some Positive Evidence on Information Content of Dividends,” 1999, in A. H. Chen Ed., Research in Finance, Volume 17, 13–39.

“The Relationship Between Ownership, Financing Decisions and Firm Performance: A Signaling Model,” with Sudipto Dasgupta and Yuk-She Chan, 1998, International Economic Review 39, 723–744.

“Valuation for Smaller Capitalization Companies,” with Scott D. Hakala, 1998, in Financial Valuation: Business and Business Interests – 1998 update, Warren, Gorham & Lamant.

“Trading Behavior and the Unbiasedness of the Market Reaction to Dividend Announcements,” with Anand M. Vijh, 1995, Journal of Finance 50. (Abstract reprinted in Financial Management Collection, 1996.)

“Beyond Mere Compliance,” with Anita S. Agarwal, Mortgage Banking, April 1993, 57–61.

“Dividend Clienteles and the Information Content of Dividend Changes,” with Anand M. Vijh, 1990, Journal of Financial Economics 26, 193–219.

“The Efficient and Inefficient Media for Political Campaign Advertising,” with Roland T. Rust and George T. Haley, 1984, Journal of Advertising 13, 45–49.

“Modeling of Non-Ideal Residence Time Distribution in a Continuous Flow Stirred Tank Reactor at Zero RPM,” with D. Prasanna Rao, 1983, Indian Chemical Engineer, 24–27.

“Alternate Criteria for the Comparison of Regression Models,” with Roland T. Rust, presented in Proceedings of the Southwestern Marketing Association, Spring 1983.

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“ESO Expensing Under the Revised FAS 123: A Practitioner’s Guide,” with Sumon C. Mazumdar, Sanjay Unni, and Anand Vijn, September 2005.

“Investment in Company Stock in 401(k) Accounts,” with Sumon C. Mazumdar, May 2005.

“The New Accounting Rules for ESO Expensing: Not Quite As Easy As 123,” with Sumon C. Mazumdar and Sanjay Unni, March 2005.

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“Auditor Compensation and Audit Failure: An Empirical Analysis,” February 2003.

“The Offer Yield of Preferred Stock,” with Sumon C. Mazumdar and Atulya Sarin, March 2002.

“Signaling, Agency Costs and Ownership Structure: Theory and Empirical Implications,” with Sudipto Dasgupta and Yuk–Shee Chan, mimeo, Hong Kong University of Science and Technology, 1997.

“Is it Appropriate to Use a Higher Discount Rate to Value Small Firms?” with Martin Hanan, Rick Knoll, and Mark Mitchell.

“Turnover in Equity Ownership, Risk and Return,” September 1995.

Charles River Associates

Professional History

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|----------------|--|
| 2019 – present | Charles River Associates Senior Consultant |
| 2012 – 2019 | Navigant Consulting Managing Director and Global Head of the Securities & Finance Practice |
| 1997 – 2014 | Haas School of Business, University of California, Berkeley Lecturer |
| 2011 – 2012 | AFE Consulting Founder and President |
| 1997 – 2011 | LECG Senior Managing Director and Practice Leader (2007 – 2011) Member – Executive Management Committee (2007 – 2011) Member – Management Advisory Committee (2003 – 2007) Member – Board of Directors (2001 – 2003) Managing Director (1999 – 2007) Director (1999) Affiliate (1998) Principal (1998) Senior Economist (1997) |
| 1995 – 1997 | BVS Senior Associate |
| 1988 – 1995 | University of Southern California Assistant Professor – Finance and Business Economics Award from Faculty Research & Innovation Fund, University of Southern California, 1990 |
| 1983 – 1988 | University of California, Berkeley Instructor Graduate Student Instructor <ul style="list-style-type: none"> • Graduate Fellowship, University of California, Berkeley (1988) • Earl F. Cheit Award for Outstanding Teaching, Graduate School of Business, University of California, Berkeley (1986–1987) • Outstanding Graduate Student Instructor Award, University of California, Berkeley (1986–1987) • Outstanding Graduate Student Instructor Award, University of California, Berkeley (1985–1986) • Award for Best Technical Paper published in Indian Chemical Engineer (1983) |

Appendix 2: Documents Considered

Case Documents

1. Memorandum of Law in Support of Defendants' Motion to Dismiss the Amended Complaint with Prejudice, September 2, 2008.
2. Appendix 1 to Lead Plaintiff's Memorandum in Opposition to Defendants' Motion to Dismiss the First Amended Complaint, October 16, 2008.
3. Third Amended Complaint, ECF No. 166, March 28, 2012.
4. Defendants' Glossary of Terms, ECF No. 320, June 9, 2014.
5. Lead Plaintiff's Glossary of Terms Used in Connection with Defendants' Motions to Dismiss the Third Amended Complaint, June 9, 2014.
6. Appeal from the United States District Court for the Northern District of Ohio at Youngstown. No. 4:08-cv-00160, United States Court of Appeals, (6th Cir. 2016), July 20, 2016.
7. Memorandum of Opinion and Order, ECF No. 478, August 14, 2018.
8. Order, In re Ohio Pub. Emps. Ret. Sys., No. 18-0310, United States Court of Appeals for the Sixth Circuit, January 23, 2019.

Declarations and Expert Reports

1. Expert Report of Dr. Greg Hallman, August 16, 2012.
2. Expert Report of Mukesh Bajaj, Ph.D., December 14, 2012.
3. Declaration of Professor Steven P. Feinstein, December 16, 2016.
4. Report on Market Efficiency Professor Steven P. Feinstein, June 7, 2017.
5. Expert Report of Mukesh Bajaj, Ph.D., September 1, 2017.
6. Expert Report of Paul A. Gompers, September 1, 2017.
7. Expert Report of David I. Tabak, Ph.D., November 16, 2023.
8. Tabak Report Production, "Appendix 1 Replication.xls."
9. Expert Report of Howard S. Shapiro, November 17, 2023.
10. Expert Report of Dr. Chudozie Okongwu, January 19, 2024.

Depositions

1. Deposition of Howard Shapiro, November 6, 2023.
2. Deposition of David I. Tabak, December 20, 2023.
3. Deposition of Howard Shapiro, January 10, 2024.

Court Opinions

1. *Basic, Inc. v. Levinson*, 485 U.S. 224 (1988).
2. *Halliburton Co. v. Erica P. John Fund, Inc.*, 134 S. Ct. 2398, 2415 (2014).

Freddie Mac Press Releases

1. August 1, 2006, "Freddie Mac Voluntarily Adopt Temporary Limited Growth For Retained Portfolio."
2. August 21, 2006, "Recent Events - Legal Proceedings."
3. September 8, 2006, "Freddie Mac Holds Annual Stockholders' Meeting."
4. October 11, 2006, "Recent Events – Unregistered Sale of Equity Securities."

5. October 19, 2006, "Recent Events – Management."
6. January 5, 2007, "Freddie Mac Provides Quarterly Market Update."
7. January 17, 2007, "Recent Events – Unregistered Sales of Equity Securities."
8. March 8, 2007, "Recent Events – Executive Compensation Actions."
9. March 23, 2007, "Freddie Mac Reports 2006 Financial Results."
10. April 12, 2007, "Recent Events – Unregistered Sale of Equity Securities."
11. May 1, 2007, "Recent Events – Freddie Mac Announces that President Eugene McQuade Declines Opportunity to Become Chief Executive Officer."
12. June 7, 2007, "Recent Events."
13. June 14, 2007, "Freddie Mac Releases First Quarter 2007 Financial Results; Company Resumes Quarterly Reporting."
14. July 19, 2007, "Recent Events – Unregistered Sales of Equity Securities."
15. July 25, 2007, "Supplemental Non-Agency, Subprime Securities Portfolio Data."
16. August 30, 2007, "Freddie Mac Releases Second Quarter 2007 Financial Results; Net Income of \$764 Million, Fair Value Increase of \$800 Million."
17. September 7, 2007, "Recent Events."
18. September 19, 2007, "Recent Events – Freddie Mac Announces Resignation of Jeffrey M. Peek From Board of Directors."
19. September 27, 2007, "Recent Events – Unregistered Sale of Equity Securities."
20. September 28, 2007, "Recent Events – Legal Proceedings."
21. November 9, 2007, "Recent Events – Executive Compensation."
22. November 20, 2007, "Freddie Mac Reports Third Quarter 2007 Net Loss of \$2.0 Billion or \$3.29 Per Diluted Share."
23. November 27, 2007, "Recent Events – Equity Offerings."
24. November 30, 2007, "Recent Events – Unregistered Sales of Equity Securities."

Freddie Mac Financial Disclosures

1. 2005 Annual Report, "Information Statement and Annual Report to Stockholders for the fiscal year ended December 31, 2005," June 28, 2006.
2. 2006 Annual Report, "Information Statement and Annual Report to Stockholders For the fiscal year ended December 31, 2006," March 23, 2007.
3. 2006 Consolidated Financial Statements.
4. 2007 Annual Report "Information Statement and Annual Report to Stockholders For the fiscal year ended December 31, 2007," February 28, 2008.
5. Supplement dated October 3, 2006 to Information Statement dated June 28, 2006.
6. Presentation, "Freddie Mac Update: October 2006."
7. Supplement dated January 5, 2007 to Information Statement dated June 28, 2006.
8. Presentation, "Freddie Mac Update: January 2007."
9. Supplement dated March 23, 2007 to Information Statement dated March 23, 2007.
10. Financial Statements and Core Tables, June 14, 2007.
11. Consolidated Financial Statements, June 14, 2007.
12. Presentation, "Freddie Mac's First Quarter 2007 Financial Results," June 14, 2007.

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13. Supplement dated June 14, 2007 to Information Statement dated March 23, 2007.
14. Financial Report for the Three Months Ended March 31, 2007, Information Statement Supplement to the 2006 Information Statement and Annual Report to Stockholders, Dated March 23, 2007, June 14, 2007.
15. Financial Statements and Core Tables, August 30, 2007.
16. Consolidated Financial Statements, August 30, 2007.
17. Presentation, "Freddie Mac's Second Quarter 2007 Financial Results," August 30, 2007.
18. Financial Report for the Three and Six Months Ended June 30, 2007, Information Statement Supplement to the 2006 Information Statement and Annual Report to Stockholders, dated March 23, 2007, August 30, 2007.
19. Supplement dated August 30, 2007 to Information Statement dated March 23, 2007.
20. Financial Statements and Core Tables, November 20, 2007.
21. Consolidated Financial Statements, November 20, 2007.
22. Presentation, "Freddie Mac's Third Quarter 2007 Financial Results," November 20, 2007.
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24. Financial Report for the Three and Nine Months Ended September 30, 2007, Information Statement Supplement to the 2006 Information Statement and Annual Report to Stockholders, dated March 23, 2007, November 20, 2007.

Freddie Mac Conference Calls

1. Thomson StreetEvents, "FRE - Freddie Mac Market Update," March 31, 2006.
2. Thomson StreetEvents, "FRE - Freddie Mac Market Update," August 1, 2006.
3. Thomson StreetEvents, "FRE - Freddie Mac Annual Shareholders Meeting," September 8, 2006.
4. Thomson StreetEvents, "FRE - Freddie Mac Market Update," October 3, 2006.
5. Thomson StreetEvents, "FRE - Freddie Mac Market Update," January 5, 2007.
6. Thomson StreetEvents, "FRE - Q4 2006 Freddie Mac Earnings Conference Call," March 23, 2007.
7. Thomson StreetEvents, "FRE - Freddie Mac Annual Stockholders' Meeting," June 8, 2007.
8. Thomson StreetEvents, "FRE - Q1 2007 Freddie Mac Financial Results Conference Call," June 14, 2007.
9. Thomson StreetEvents, "FRE - Freddie Mac Second Quarter 2007 Financial Results," August 30, 2007.
10. Thomson StreetEvents, "FRE - Q3 2007 Freddie Mac Earnings Conference Call," November 20, 2007.
11. Thomson StreetEvents, "FRE - Q4 2007 Freddie Mac Earnings Conference Call," February 28, 2008.

Freddie Mac Volume Summaries

1. Freddie Mac Monthly Volume Summaries for the months of August 2006 to November 2007.

Freddie Mac Form 4 Documents

1. Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, June 5, 2006.
2. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, June 5, 2006.
3. Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, June 5, 2006.
4. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2006.
5. Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, September 1, 2006.
6. Statement of Changes in Beneficial Ownership, Form 4 for Anthony S. Piszal, December 7, 2006.
7. Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, December 31, 2006.
8. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, January 3, 2007.
9. Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, March 29, 2007.
10. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, March 29, 2007.
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15. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, May 6, 2007.
16. Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, May 6, 2007.
17. Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, June 5, 2007.
18. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, June 5, 2007.
19. Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, June 5, 2007.
20. Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2007.
21. Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, September 1, 2007.

Fannie Mae Documents

1. Fannie Mae Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2005, May 2, 2007.
2. Fannie Mae Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2007, February 27, 2008.
3. Fannie Mae News Release, "Fannie Mae Files 2007 Quarterly Reports with the SEC," November 9, 2007.

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1. Bank of America, "Freddie Mac Model Revisions: Raising PT and Reiterating Buy Rating," October 5, 2006.
2. Bear Stearns, "Mortgage Finance/GSEs: GSE Monthly: An Update on GSE Volume and Activity," June 2007.
3. Credit Suisse, "Mortgage Finance: June Monthly: Shaky Housing Fundamentals," June 1, 2007.
4. UBS, "Consumer Finance Monthly: Reordering Preferences; Top Pick Now ZION Over CIT, AXP; More Positive on GSEs," June 1, 2007.
5. UBS, "Consumer Finance Monthly: Reordering Preferences; Top Pick Now ZION Over CIT, AXP; More Positive on GSEs," June 1, 2007.
6. Deutsche Bank, "Daily MBS Market Commentary," June 3, 2007.
7. UBS, "U.S. Morning Meeting Highlights," June 4, 2007.
8. Deutsche Bank, "Daily MBS Market Commentary," June 5, 2007.
9. Lehman Brothers, "MBA Index Commentary," June 6, 2007.
10. Lehman Brothers, "Effect of 1Q07 HPA Update," June 6, 2007.
11. PiperJaffray, "Weekly Mortgage Update: Refi Apps Decline On Higher Rates; Purchase Apps Stable," June 6, 2007.
12. Bank of America, "GSEs Reporting Update; A Positive Step Towards the Return to Normalcy," June 8, 2007.
13. UBS, "US Morning Research Notes," June 8, 2007.
14. UBS, "US Banks wrap up," June 8, 2007.
15. Morgan Stanley, "Mortgage Finance: Market Volatility Widens GSE Basis," June 13, 2007.
16. PiperJaffray, "Weekly Mortgage Update: Will Higher Rates Spoil Stabilizing Purchase Market?" June 13, 2007.
17. Bear Stearns, "Freddie Mac Releases 1Q07 Results, Resumes Quarterly Reporting," June 14, 2007.
18. Bear Stearns, "Freddie Mac Releases 1Q07 Results Resumes Quarterly Reporting (Part 1)," June 14, 2007.
19. Bear Stearns, "Freddie Mac Releases 1Q07 Results Resumes Quarterly Reporting (Part 2)," June 14, 2007.
20. Credit Suisse, "Freddie Mac: Challenging Market Conditions Hamper Q1 Results," June 14, 2007.
21. JP Morgan, "Freddie Mac: Mark-to-Market Items Muddy Otherwise In-line Quarter," June 14, 2007.
22. UBS, "Freddie Mac: Reports 1Q GAAP Loss, But Operating Metrics Increasingly Positive," June 14, 2007.

23. Barclays, "FRE Miss Not As Bad As It Looks," June 15, 2007.
24. Lehman Brothers, "The GSEs: Past, Present, and Future: Decoding Earnings, Fundamentals, Value," June 15, 2007.
25. Credit Suisse, "Credit Suisse Breakfast Banker," June 15, 2007.
26. FBR, "Freddie Mac: Industry Trends Point toward Upgrade-- Raising Price Target," June 15, 2007.
27. Argus, "Market Update," June 18, 2007.
28. Argus, "Freddie Mac," June 18, 2007.
29. Lehman Brothers, "The GSEs: Past, Present, and Future," June 18, 2007.
30. UniCredit, "Credit Flash: Freddie Mac with unexpected loss in Q1," June 18, 2007.
31. Lehman Brothers, "Freddie Mac Update Meeting with Mgt," June 20, 2007.
32. Lehman Brothers, "MBA Index Commentary," June 20, 2007.
33. UBS, "Freddie Mac: We Est. 1Q Op. EPS of \$0.58; Enhanced Operating Model; Initiating 08-09 Estimates," June 21, 2007.
34. UBS, "Freddie Mac: We Est. 1Q Op. EPS of \$0.58; Enhanced Operating Model; Initiating 08-09 Estimates," June 21, 2007.
35. UBS, "US Morning Research Notes," June 21, 2007.
36. UBS, "U.S. Morning Meeting Highlights," June 21, 2007.
37. "UBS, "GSE Update: Equity, MBS, Debt, and Regulatory Views on the GSEs – Conference Call Take-Aways," June 21, 2007.
38. UBS, "Morning Espresso - United States," June 21, 2007.
39. UBS, "US Morning Research Notes," June 21, 2007.
40. Bank of America, "Freddie Mac: May Data: Continued Portfolio Growth and Better Credit Quality," June 22, 2007.
41. Bear Stearns, "FRE: MAY DATA SHOW SOME PICKUP IN PURCHASES (PART 2)," June 22, 2007.
42. Bear Stearns, "Freddie Mac: May Data Show Some Pickup in Purchases," June 22, 2007.
43. Credit Suisse, "Freddie Mac: Volumes and Retained Portfolio Rise," June 22, 2007.
44. Credit Suisse, "Credit Suisse Breakfast Banker," June 25, 2007.
45. Argus, "Weekly Staff Report," June 25, 2007.
46. PiperJaffray, "Weekly Mortgage Update: Still Waiting For Housing Market Bottom," June 27, 2007.
47. Bank of America, "Fannie Mae: Model Revisions; Raising PT and Reiterating Buy Rating," June 28, 2007.
48. Citibank, "GSEs: Stars are Aligning," June 28, 2007.
49. Credit Suisse, "GSEs: March Capital - Fannie Earned About \$1.1 bn in Q1," June 28, 2007.
50. Credit Suisse, "Credit Suisse Breakfast Banker," June 29, 2007.
51. PiperJaffray, "Specialty Finance Monthly: Economy Bumping Along During Housing Recession," July 3, 2007.
52. Credit Suisse, "Mortgage Finance: Housing Fundamentals Deteriorate Further," July 9, 2007.
53. UBS, "Consumer Finance Monthly: Top Picks Remain ZION, CIT, and AXP; In Mortgage, Downgraded MIs, Prefer GSEs," July 9, 2007.
54. Citibank, "Specialty/Mortgage Finance Earnings Preview: Subprime Redux," July 10, 2007.

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55. PiperJaffray, "Consumer Credit Growth Continued to Slow in May," July 10, 2007.
56. PiperJaffray, "Solid Jobs Softening Housing Recession Pain; Used Car Values Increase," July 10, 2007.
57. Bank of America, "Consumer and Specialty Finance Weekly: Mortgage 2Q07 Earnings Preview - The worst is still to come," July 13, 2007.
58. PiperJaffray, "Consumer Mortgage Preview: Another Tough Quarter; Slow Motion Recovery," July 13, 2007.
59. PiperJaffray, "This Housing Downturn Has More To Go," July 13, 2007.
60. Keefe, Bruyette & Woods, "Banks: Mortgage," July 16, 2007.
61. Fitch, "Fitch Rates Freddie Mac's \$500MM Non-Cumulative Perpetual Preferred Stock 'AA-',", July 17, 2007.
62. Merrill Lynch, "GSEs more palatable; Pick entry-points carefully," July 17, 2007.
63. Citibank, "Freddie Mac: June Data Show Slight Retained Portfolio Growth, Lots of Moving Parts," July 23, 2007.
64. Credit Suisse, "Freddie Mac: Purchase Commitments Surge on Wider Option Adjusted Spreads," July 23, 2007.
65. UBS, "Freddie Mac: June Numbers Reflect Solid Credit Portfolio Growth; Slight Growth in Retained Portfolio," July 23, 2007.
66. Bear Stearns, "Freddie Mac Releases June Monthly Volume Summary," July 24, 2007.
67. Bear Stearns, "Freddie Mac Releases June Monthly Volume Summary (Part 1)," July 24, 2007.
68. Bear Stearns, "Freddie Mac Releases June Monthly Volume Summary (Part 2)," July 24, 2007.
69. Credit Suisse, "Credit Suisse Breakfast Banker," July 24, 2007.
70. Bank of America, "Consumer and Specialty Finance Weekly: Specialty Commercial Lenders 2Q07 Earnings Preview," July 27, 2007.
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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION**

OHIO PUBLIC EMPLOYEES
RETIREMENT SYSTEM, On Behalf of Itself
and all Others Similarly Situated,

Plaintiff,

vs.

FEDERAL HOME LOAN MORTGAGE
CORPORATION a/k/a FREDDIE MAC,
RICHARD F. SYRON, PATRICIA L. COOK,
ANTHONY S. PISZEL, and EUGENE M.
McQUADE,

Defendants.

)
)
)
) CIVIL ACTION NO. 4:08-cv-160

)
) JUDGE BENITA Y. PEARSON

)
) MAGISTRATE JUDGE
) WILLIAM H. BAUGHMAN, JR.

DEFENDANTS' GLOSSARY OF TERMS

Per this Court's May 16, 2014 Order, Federal Home Loan Mortgage Corporation ("Freddie Mac"), Richard F. Syron, Patricia Cook, Anthony Pisel, and Eugene McQuade hereby submit this Glossary of Terms.

SUBPRIME MORTGAGE LOAN: Loans that originating lenders classify and label as "subprime" loans upon their origination, marketing, and sale are "subprime" loans. Freddie Mac did not buy and hold in its guarantee portfolio loans classified by the originating lender as "subprime" loans upon their issuance, with the exception of a de minimus amount of Structured Securities that were backed by loans identified as being "subprime" by the original issuer.¹

That said, there is not, and there was not during the putative class period, a universally accepted definition of the term "subprime" loan that originating lenders use, or have used, when

¹ See TAC ¶ 156; see also Freddie Mac 2006 Annual Report to Stockholders (Mar. 23, 2007), ECF No. 298-2 ("2006 Annual Report") at p. ID 12479 ("Also included in our credit guarantee portfolio are Structured Securities backed by non-agency mortgage-related securities where the underlying collateral was **identified as being subprime by the original issuer.**") (emphasis added); see also Freddie Mac 2007 Annual Report to Stockholders (Feb. 28, 2008), ECF No. 298-3 ("2007 Annual Report") at p. ID 12678-79 ("We estimate that approximately \$6 billion and \$3 billion of loans underlying our Structured Transactions at December 31, 2007 and 2006, respectively, were **classified as subprime mortgage loans.**") (emphasis added).

they classify, label, market, and sell loans as “subprime” loans.² “Subprime” loans typically are originated by specialized lenders, rather than by mainstream mortgage lenders.³ As a group, these specialized subprime originators have been referred to as the “subprime channel.”⁴ Freddie Mac did not purchase and hold in its guarantee portfolio, during the relevant period, loans sold through “traditional subprime channels” of loan origination (except as noted above),⁵ and the Third Amended Complaint (“TAC”) does not allege otherwise.

RISK-LAYERED MORTGAGE LOAN: In the mortgage industry, “risk-layered mortgage loans” connote loans that have more than one characteristic associated with higher levels of credit risk.⁶ The combination of multiple higher risk characteristics associated with a loan increases the degree of credit risk presented by that loan. For example, mortgages with both high LTV ratios and lower FICO credit scores typically experience higher rates of delinquency, default, and credit losses.⁷ An article on which Plaintiff relies in the TAC discusses risk layering as it relates to the loans in Freddie Mac’s guarantee portfolio, as of the end of the second quarter of 2007, as follows: “Loans to borrowers with a FICO credit score lower than 620 make up 4% of the total [Freddie Mac guarantee] portfolio. But, significantly, loans with both original LTVs over 90% and FICO scores below 620 make up a tiny proportion of the portfolio at less than 1%.”⁸

² See Mem. of Law in Support of Freddie Mac’s Motion to Dismiss (“MB”) at 48-50 (collecting authority); 2006 Annual Report, ECF No. 298-2 at p. ID 12479; Thomas P. Lemke, Gerald T. Lins & Marie E. Picard, Mortgage-Backed Securities: Developments and Trends in the Secondary Mortgage Market § 3:6 (2013-14 ed.) (“There is no single accepted or all-encompassing definition of ‘subprime’ and subprime mortgages are not homogenous.”); SEC v. Mozilo, No. 09-cv-03994 (C.D. Cal.), Compl. ¶ 21, ECF No. 1. (referring to differing definitions of “subprime” loans, using as a cut-off loans to borrowers with FICO scores lower than either 620 or 660); MB at 17-18 (citing to documents referenced in the TAC evidencing that Freddie Mac disclosed all of the loans in its guarantee portfolio made to borrowers with FICO scores below either 620 or 660, and the TAC does not contest the accuracy of any of those disclosures); Kuriakose v. Federal Home Loan Mortg. Corp., 897 F. Supp. 2d 168, 182-83 (S.D.N.Y. 2012) (noting disclosure by Freddie Mac of all loans in its guarantee portfolio made to borrowers with FICO scores below either 620 or 660).

³ Lemke, supra, § 3:5-6.

⁴ See, e.g., Kuriakose, 897 F. Supp. 2d at 183 (referencing “traditional subprime channels”).

⁵ Id. (noting that Freddie Mac did not purchase or guarantee loans from “traditional subprime channels”).

⁶ See Conference of State Bank Supervisors, Am. Assoc. of Residential Mortg. Regulators, Guidance on Nontraditional Mortgage Product Risks (“CSBS/AARMR”) at 5, available at http://www.csbs.org/regulatory/policy/policy-guidelines/Documents/CSBS-AARMR_FINAL_GUIDANCE.pdf.

⁷ See 2007 Annual Report, ECF No. 298-3 at p. ID 12682.

⁸ Mission Critical, Mortgage Risk Magazine (Oct. 2007), ECF No. 298-40 at p. ID 13708-09 (emphasis added).

Similarly, the report published by the Financial Crisis Inquiry Commission of the United States Congress stresses that the effects of “risk layering” account for the exponential difference in the delinquency rate between the GSE (i.e., Freddie Mac and Fannie Mae) and non-GSE loans that it studied with FICO scores below 660.⁹ As the FCIC concluded, the non-GSE loans had a delinquency rate over 400% higher than the GSE loans that shared the same FICO score characteristic (i.e., 660 or below), because the non-GSE loans had many additional high-risk characteristics layered on top of the FICO score risk, while the GSE loans predominantly did not. Id. (reporting a 6.2% delinquency rate for the GSE loans with FICO scores below 660, versus a 28.3% delinquency rate for the non-GSE loans with FICO scores below 660); see also MB at 54-55. Based upon these differences in loan performance, the FCIC observed that “grouping all of these loans together,” as if they are identical or very similar, “is misleading,” given the effect that “risk-layering” has on the actual performance of such loans. See MB at 54-55 (quoting FCIC Report). For this reason, the FCIC Report concludes: “GSE mortgages with some riskier characteristics such as high loan-to-value ratios are not at all equivalent to those mortgages in securitizations labeled subprime and Alt-A by issuers.”¹⁰

SUBPRIME-LIKE LOAN: The term “subprime-like loan” is not a term of art within the mortgage industry, and it does not have a definition. Rather, it is a descriptive term that would have a different meaning depending upon the person who used that term and the context in which it was used. While there is no definition of a “subprime-like loan,” that description does connote what a “subprime-like loan” is *not*. A loan described as “subprime-like” is *not* a loan that was actually classified, labeled, and sold as a “subprime” loan by the lender that originated the loan. If it were, such a loan would not be referred to as “like” a “subprime” loan, but rather as a “subprime” loan. Generally speaking, a loan referred to as “subprime-like” might have some characteristics in common with a loan that an originating lender classified, labeled, and sold as a

⁹ See also Fin. Crisis Inquiry Comm’n, Final Report of the Nat’l Comm’n on the Causes of the Fin. & Econ. Crisis in the U.S. (Jan. 2011), ECF No. 298-60 (“FCIC Report”) at p. ID 14314-15.

¹⁰ FCIC Report, ECF No. 298-60 at p. ID 14315.

“subprime” loan through the “subprime channel,” while also possessing other attributes different from such loans.¹¹ These differences have a substantial impact on the expected and actual performance of these loans.¹²

NONTRADITIONAL MORTGAGE LOANS: The term “nontraditional mortgage loans” does not have a fixed definition in the mortgage industry. Generally speaking, nontraditional mortgage loans are different than traditional fixed interest rate mortgage loans and include, but are not limited to, interest-only mortgages loans, Alt-A mortgage loans, and payment-option adjustable rate mortgages (“ARMs”), which may also be referred to as “alternative mortgage products.”¹³ Some of these products allow borrowers to exchange lower payments during an initial period for higher payments during a later amortization period.¹⁴ During the putative class period, as Freddie Mac disclosed, it expected nontraditional or alternative mortgage products that it purchased “to default more often than traditional products” that it purchased.¹⁵ Loans classified and labeled “subprime” by the originating lender may also be regarded as nontraditional mortgage loans.¹⁶ However, many types of loans that might be referred to as nontraditional mortgage loans are not “subprime” loans, and they present relatively lower levels of credit risk than loans classified and labeled “subprime” by the originating lender and sold through the “subprime channel.”¹⁷

¹¹ See supra (section addressing “risk-layered mortgage loans” and discussing the significantly more negative performance of loans “labeled subprime and Alt-A by issuers,” on the one hand, as compared to “GSE mortgages with some riskier characteristics such as high loan-to-value ratios” or lower FICO scores, on the other hand) (quoting FCIC Report).

¹² Id.

¹³ CSBS/AARMR at 1; see also Freddie Mac Information Statement and Annual Report to Stockholders for the Fiscal Year Ended December 31, 2005 (June 28, 2006), ECF No. 298-1 (“2005 Annual Report”) at p. ID 12246, 12308; 2006 Annual Report, ECF No. 298-2 at p. ID 12449, 12479; 2007 Annual Report, ECF No. 298-3 at p. ID 12596; Freddie Mac Form 10-Q for the Quarterly Period Ended June 30, 2008 (Aug. 6, 2008), ECF No. 298-5 (“Q2 2008 10-Q”) at p. ID 12840; see infra (discussions of “Alt-A mortgage loans,” “interest-only loans,” “payment-option adjustable rate mortgage loans,” and “alternative mortgage market”).

¹⁴ See id.

¹⁵ See, e.g., 2005 Annual Report, ECF No. 298-1 at p. ID 12308.

¹⁶ See Lemke, supra, § 3:5.

¹⁷ See supra (section discussing “risk-layered mortgage loans” and discussing the significantly more negative performance of loans “labeled subprime and Alt-A by issuers,” on the one hand, as compared to “GSE

HIGH-RISK MORTGAGE LOANS: The term “high-risk mortgage loans” is not a term of art within the mortgage industry, and it does not have a fixed definition. Rather, it is a descriptive term that would have a different meaning depending upon the person who used that term and the context in which it was used. Mortgage loans with characteristics that are associated with higher levels of credit risk, such as mortgages with high LTV ratios or mortgages to borrowers who have lower credit (FICO) scores, are among the loans that would generally be regarded as giving rise to a relatively higher risk of default than loans that lack those characteristics.¹⁸ Generally speaking, the greater the amount of higher-risk credit characteristics associated with a loan, i.e., the greater the amount of “risk-layering” within a loan, the higher the risk that the loan will default.¹⁹ Examples of loans that would generally be regarded as presenting relatively higher degrees of credit risk include nontraditional (or alternative) mortgage products, such as interest-only loans, payment-option adjustable rate mortgages,²⁰ and loans originated with less documentation, such as Alt-A loans.²¹ Loans classified and labeled “subprime” by the originating lender would also be regarded as high-risk mortgage loans, as such loans generally present a high degree of credit risk. However, many types of loans that might be referred to as high-risk loans are not “subprime” loans, and they present relatively lower levels of credit risk than loans labeled and classified as “subprime” by the originating lender, and sold through the “subprime channel.”²²

mortgages with some riskier characteristics such as high loan-to-value ratios” or lower FICO scores, on the other hand) (quoting FCIC Report).

¹⁸ See, e.g., MB at 17; 2005 Annual Report, ECF No. 298-1 at p. ID 12310; 2006 Annual Report, ECF No. 298-2 at p. ID 12480; 2007 Annual Report, ECF No. 298-3 at p. ID 12681; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12901; Transcript, Freddie Mac Second Quarter 2007 Financial Results (Aug. 30, 2007), ECF No. 298-36 at p. ID 13558 (disclosing the quantity of loans in its guarantee portfolio with certain higher-risk characteristics including, inter alia, FICO scores below 620; original LTVs over 90%; the combination of both FICO scores below 620 and original LTVs over 90%).

¹⁹ See supra (discussion of “risk-layered mortgage loans”).

²⁰ See infra (discussion of “payment-option adjustable rate mortgages”).

²¹ See infra; see also 2007 Annual Report, ECF No. 298-3 at p. ID 12598.

²² See supra (section addressing “risk-layered mortgage loans,” and discussing the significantly more negative performance of loans “labeled subprime and Alt-A by issuers,” on the one hand, as compared to “GSE mortgages with some riskier characteristics such as high loan-to-value ratios” or lower FICO scores, on the other hand) (quoting FCIC Report).

ALT-A MORTGAGE LOANS: Although there is no universally accepted definition of Alt-A (short for “Alternative-A paper”) in the mortgage industry, Freddie Mac principally acquired, during the relevant period, mortgage loans originated as Alt-A from its traditional lenders that largely specialized in originating prime mortgage loans. These lenders typically originated Alt-A loans as a complementary product offering and generally followed an origination path similar to that used for their prime origination process. In determining Freddie Mac’s exposure to Alt-A loans in its guarantee portfolio, Freddie Mac classified mortgage loans as Alt-A if the lender that delivered them to Freddie Mac had classified the loans as Alt-A, or if the loans had reduced documentation requirements which indicated that the loan should be classified as Alt-A.²³

INTEREST-ONLY LOAN: In the mortgage industry, an “interest-only loan” is a mortgage loan that allows the borrower to pay only interest (either fixed-rate or adjustable-rate) for a fixed period of time before principal amortization payments are required to begin.²⁴ After the end of the interest-only period, the borrower can choose to refinance the loan, pay the principal balance in total, or begin paying the monthly scheduled principal due on the loan.²⁵ An interest-only loan is a nontraditional mortgage loan.²⁶

PAYMENT-OPTION ADJUSTABLE-RATE MORTGAGE (“ARM”): In the mortgage industry, a payment-option “ARM” is a mortgage loan that permits a variety of repayment options, including minimum, interest-only, fully amortizing 30-year and fully amortizing 15-year payments.²⁷ The minimum payment alternative for payment-option ARM loans allows the borrower to make monthly payments that may be less than the interest accrued for the period.²⁸

²³ See, e.g., 2007 Annual Report, ECF No. 298-3 at p. ID 12679; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12903.

²⁴ See, e.g., 2006 Annual Report, ECF No. 298-2 at p. ID 12479; 2007 Annual Report, ECF No. 298-3 at p. ID 12678; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12967.

²⁵ Id.

²⁶ See supra.

²⁷ See, e.g., 2006 Annual Report, ECF No. 298-2 at p. ID 12479; 2007 Annual Report, ECF No. 298-3 at p. ID 12678; Q2 2008 10-Q, ECF No. 298-5 at p. ID 12967.

²⁸ Id.

The unpaid interest, known as negative amortization, is added to the principal balance of the loan, which increases the outstanding loan balance.²⁹

ALTERNATIVE MORTGAGE MARKET: The term “alternative mortgage market” does not have a fixed definition in the mortgage industry. Generally, the term may be used to refer to the market for alternative mortgage products, which would include products discussed herein as “nontraditional mortgage loans.”³⁰

Dated: June 9, 2014

Respectfully submitted,

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²⁹ Id.

³⁰ See supra (discussion of “nontraditional mortgage loans”).

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CERTIFICATE OF SERVICE

I hereby certify that on June 9, 2014, a copy of the foregoing was filed electronically. Notice of this filing will be sent by operation of the Court's electronic filing system to all parties indicated on the electronic filing receipt. Parties may access this filing through the Court's system.

/s/ Hugh E. McKay
Hugh E. McKay

Appendix 4: Market Model Description

1. To estimate Freddie Mac's excess returns on November 20, 2007 and the "capital raise dates" (November 27, 28, and 30, 2007) (collectively, the "Freddie Mac Excess Return Dates"), and to assess the statistical significance of these excess returns, I follow a standard methodology and estimate a statistical "market model" to isolate Freddie Mac's "excess" or "abnormal" returns, *i.e.*, the stock return after accounting for non-company specific factors such as market- and industry-wide factors.¹ The basic idea is to separate the effects on stock price of company-specific information from non-company-specific information. A regression analysis is used to calculate the relationship between changes in a company's security price (in this case Freddie Mac stock) and corresponding changes in the value of other variables capturing market- or industry-wide effects, such as the S&P 500, a broad market index. Then, the estimated relationship (*i.e.*, the "market model") and the actual performance of the associated variables are used to compute the model's "predicted return" for the stock.

2. The security's "excess return" (or "abnormal return") is then calculated by subtracting the predicted return from the security's observed return. The excess return measures the portion of the security's observed return that cannot be explained by contemporaneous changes in the market- or industry-wide factors captured by the model. It can be thought of as the company-specific component of the return.

3. The market model I applied here uses the S&P 500 Total Return Index as the market index to capture market-wide factors, the S&P 500 Financials Total Return Index as the broader industry index to capture general financial industry factors, and Fannie Mae to capture unique

¹ See, e.g., MacKinlay, A. Craig, 1997, "Event Studies in Economics and Finance," *Journal of Economic Literature* 35 ("MacKinlay (1997)"), pages 13-39. By using a market model to analyze excess returns, I am not offering an opinion on nor accepting that Freddie Mac stock traded in an efficient market during the Relevant Period.

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GSE-specific industry factors.

4. As discussed in the main body of this report in Section IV.A, Fannie Mae is a GSE that is the most similar company from a business perspective to Freddie Mac. As GSEs, both Freddie Mac and Fannie Mae were regulated by the U.S. Department of Housing and Urban Development (“HUD”) and the Office of Federal Housing Enterprise Oversight (“OFHEO”).² The two companies were subject to affordable housing goals set by HUD. Regulators also placed limitations on both firms regarding the terms and principal amounts of loans and securities that could be purchased and/or guaranteed.³ OFHEO, the “safety and soundness regulator” for Freddie Mac and Fannie Mae, required the companies to “maintain a mandatory target capital surplus of 30 percent over [its] minimum capital requirement, subject to certain conditions and variations” and that both companies “submit weekly reports” on capital levels.⁴ Analysts cover both GSEs in

² Fannie Mae, 2005 Annual Report, page 1. Freddie Mac 2006 Annual Report, pages 6-9. HUD had “general regulatory power over Freddie Mac, including power over new programs, affordable housing goals and fair lending.” OFEHO, a separate office within HUD with substantial independence, was the “safety and soundness regulator for Freddie Mac and Fannie Mae.” OFHEO had “authority to: issue regulations to carry out its responsibilities; conduct examinations; require reports of financial condition and operation; develop and apply critical, minimum and risk-based capital standards, including classifying the capital levels not less than quarterly; prohibit excessive executive compensation under prescribed standards; and impose temporary and final cease-and-desist orders and civil money penalties, provided certain conditions are met.”

³ See, e.g., Freddie Mac 2006 Annual Report, page 3 (“Types of Mortgages We Purchase: Our charter establishes general parameters for the terms and principal amounts of the mortgages we may purchase Within our charter parameters, the residential mortgage loans we purchase or that underlie mortgage-related securities we purchase generally fall into one of two categories: Single-Family Mortgages. Single-family mortgages are secured by one- to four-family properties. The types of single-family mortgages we purchase include 40-year, 30-year, 20-year, 15-year and 10-year fixed-rate mortgages, interest-only mortgages, adjustable-rate mortgages, or ARMs, and balloon/reset mortgages.”) and page 4 (“In response to a request by the Office of Federal Housing Enterprise Oversight, or OFHEO, we announced on August 1, 2006 that we would voluntarily limit the growth of our Retained portfolio to no more than 2.0 percent annually (and 0.5 percent quarterly on a cumulative basis), based on its carrying value as contained in our minimum capital report to OFHEO filed on July 28, 2006, which was \$710.3 billion.”)

⁴ Freddie Mac 2006 Annual Report, pages 8-9. In 2004 OFHEO “created a framework for monitoring [Freddie Mac’s] capital due to our higher operational risk, including [Freddie Mac’s] inability to produce timely financial statements in conformity with GAAP” and directed that Freddie Mac “maintain a mandatory target capital surplus of 30 percent over our minimum capital requirement, subject to certain conditions and variations;” that Freddie Mac “submit weekly reports concerning our capital levels;” and that Freddie Mac “obtain prior approval of certain capital transactions including common stock repurchases, redemption of any preferred stock or payment of dividends on preferred stock above stated contractual rates.” Fannie Mae 2005 Annual Report, page 26.

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the same reports and changed ratings on both simultaneously.⁵ Fannie Mae's stock returns can therefore be used as a proxy for the political and regulatory risk that affects both Freddie Mac and Fannie Mae.⁶

5. One of the assumptions when estimating the market model is that the volatility of excess returns remains constant over the estimation and prediction (in this case "excess return") periods.⁷ To estimate the market model's parameters, I use data for the period from August 9, 2007 to November 19, 2007, the day before November 20, 2007, the alleged corrective disclosure date. As I discuss in the main body of this report, financial market conditions shifted dramatically in the second half of 2007 and on August 9, 2007 global credit markets suddenly became ensnared in the throes of a severe and unforeseen credit crisis. This date marked the start of the global credit and liquidity crisis that eventually morphed into the Great Recession, and the start of a period of heightened market-wide volatility.⁸

6. Using the market model estimated over the estimation period to calculate the excess return, I then continue the standard procedure and assess the excess return's statistical significance to determine if the observed excess return is statistically significant relative to normal day-to-day variability reflecting vicissitudes of stock prices. That is, I examine the question of "whether the

⁵ See, e.g., Fox Pitt Kelton, "FNM and FRE: Capital Constrained – Downgrading to Underperform," November 20, 2007. See also, Merrill Lynch, "GSE stocks come into focus due to credit concerns," October 25, 2007 ("Fannie Mae (FNM; C-2-7; \$58.27) and Freddie Mac (FRE; C-2-7; \$53.24) remain under pressure as the market rotates out of stocks exposed to the deteriorating housing market. Both stocks have been viewed as good flight-to-quality stocks, as each has largely avoided the riskiest loans originated during the credit bubble and had benefited from a more favorable regulatory backdrop emanating from Washington. However, we think investors have systematically avoided or rotated out of stocks that have significant exposure to weakening housing fundamentals, putting FNM and FRE in the path of fear-induced selling.").

⁶ I note that Fannie Mae released its Q1, Q2, and Q3 2007 results on November 9, 2007. Fannie Mae News Release, "Fannie Mae Files 2007 Quarterly Reports with the SEC," November 9, 2007. Fannie Mae told investors that "[r]esults for the first three quarters of 2007 reflect worsening housing market conditions, volatility in credit markets in the third quarter, and compression in net interest yield, each of which affected net income," and that "[c]redit related expenses, including the provision for credit losses, rose \$1.6 billion, to \$2.0 billion." Fannie Mae also stated that "[w]e expect the market forces that affected our results in the first three quarters of the year to continue through the end of the year."

⁷ See, e.g., MacKinlay (1997), page 18.

⁸ See Section IV.B of this report.

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absolute value of the return is large enough so that the research can indicate with confidence that the return is relatively unusual.”⁹ The statistical significance of excess returns in this context is typically assessed by calculating a standardized measure of the size of the excess return known as a “t-statistic.” The t-statistic is equal to the excess return divided by the market model’s “standard error.” Each t-statistic corresponds to a “p-value,” which represents the probability under the assumption of the “null hypothesis,” of obtaining a result equal to or more extreme than what was actually observed. In this case, the “null” hypothesis is that the excess return is equal to zero, i.e., the stock return being analyzed was equal to the predicted return. The p-value can be thought of as how likely it is the observed difference was due to chance. The conventional level of statistical significance is a p-value of 5% or less. In some contexts, the 10% level is also considered statistically significant.

7. Using the market model results and this standard statistical framework, I examined Freddie Mac’s stock price reaction on November 20, 2007, the alleged corrective disclosure date, and the subsequent capital raise dates (i.e., the “Freddie Mac Excess Return Dates”). As shown in Table A.1 below, I find that Freddie Mac’s cumulative stock price reaction over the four Freddie Mac Excess Return Dates is statistically insignificant at conventional levels, i.e., the p-value is greater than 5%. This means that the excess return is statistically indistinguishable from zero, i.e., one cannot rule out that the price reaction occurred by chance alone.

⁹ Mark L. Mitchell and Jeffry M. Netter, “The Role of Financial Economics in Securities Fraud Cases: Applications at the Securities and Exchange Commission,” *The Business Lawyer*, February 1994.

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Table A.1: Testing for statistical significance of excess returns on November 20, 27, 28, and 30, 2007 (“Freddie Mac Excess Return Dates”)***Panel A: Testing for statistical significance of Freddie Mac Excess Return Dates***

| | Freddie Mac ("FRE") Log Return | FRE Predicted Log Return | FRE Excess Log Return | T-Statistic | P-value |
|-------------------|--------------------------------------|-----------------------------|--------------------------|--------------|--------------|
| 11/20/07 | -33.82% | -15.58% | -18.24% | -13.52 | 0.000 *** |
| 11/27/07 | 4.90% | 2.22% | 2.68% | 1.99 | 0.051 * |
| 11/28/07 | 13.40% | 7.78% | 5.62% | 4.17 | 0.000 *** |
| 11/30/07 | 17.26% | 10.17% | 7.10% | 5.26 | 0.000 *** |
| CAR 4-days | | | -2.84% | -1.05 | 0.297 |

Panel B: Parameters of market model

| | |
|-------------------------|--------|
| Number of Observations | 68 |
| Adjusted R ² | 77.22% |
| Standard Error | 1.35% |

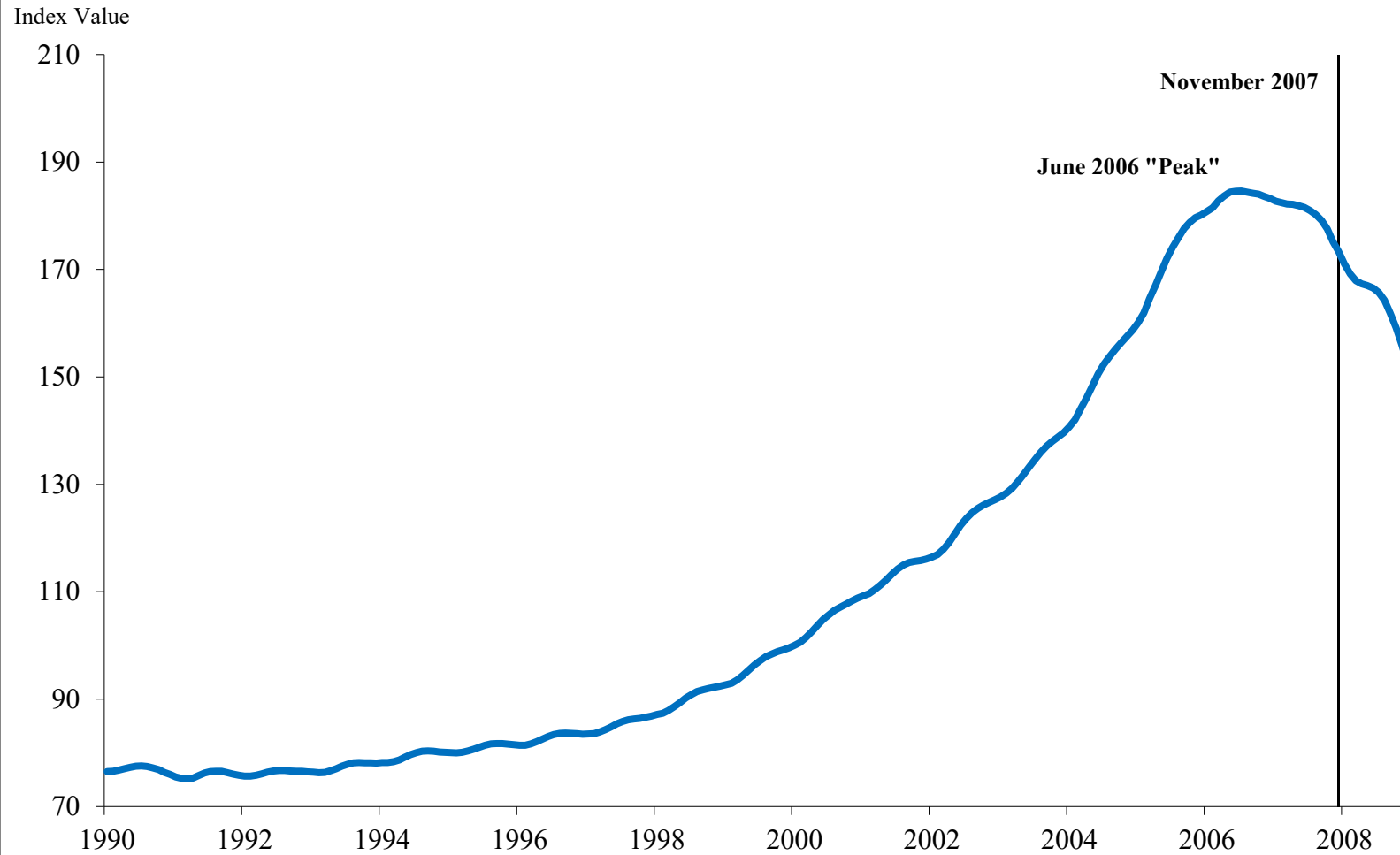
| <i>Coefficients</i> | Beta | T-statistic | P-Value |
|---|---------|-------------|-----------|
| Alpha (Intercept) | (0.005) | -3.07 | 0.003 *** |
| S&P 500 Total Return Index | 1.751 | 12.72 | 0.000 *** |
| Orthogonalized Component of the S&P Financials TR Index | 1.103 | 5.29 | 0.000 *** |
| Orthogonalized Component of Fannie Mae | 0.543 | 6.35 | 0.000 *** |

* Denotes significance at the 10% level (in a two-tailed test).

** Denotes significance at the 5% level (in a two-tailed test).

*** Denotes significance at the 1% level (in a two-tailed test).

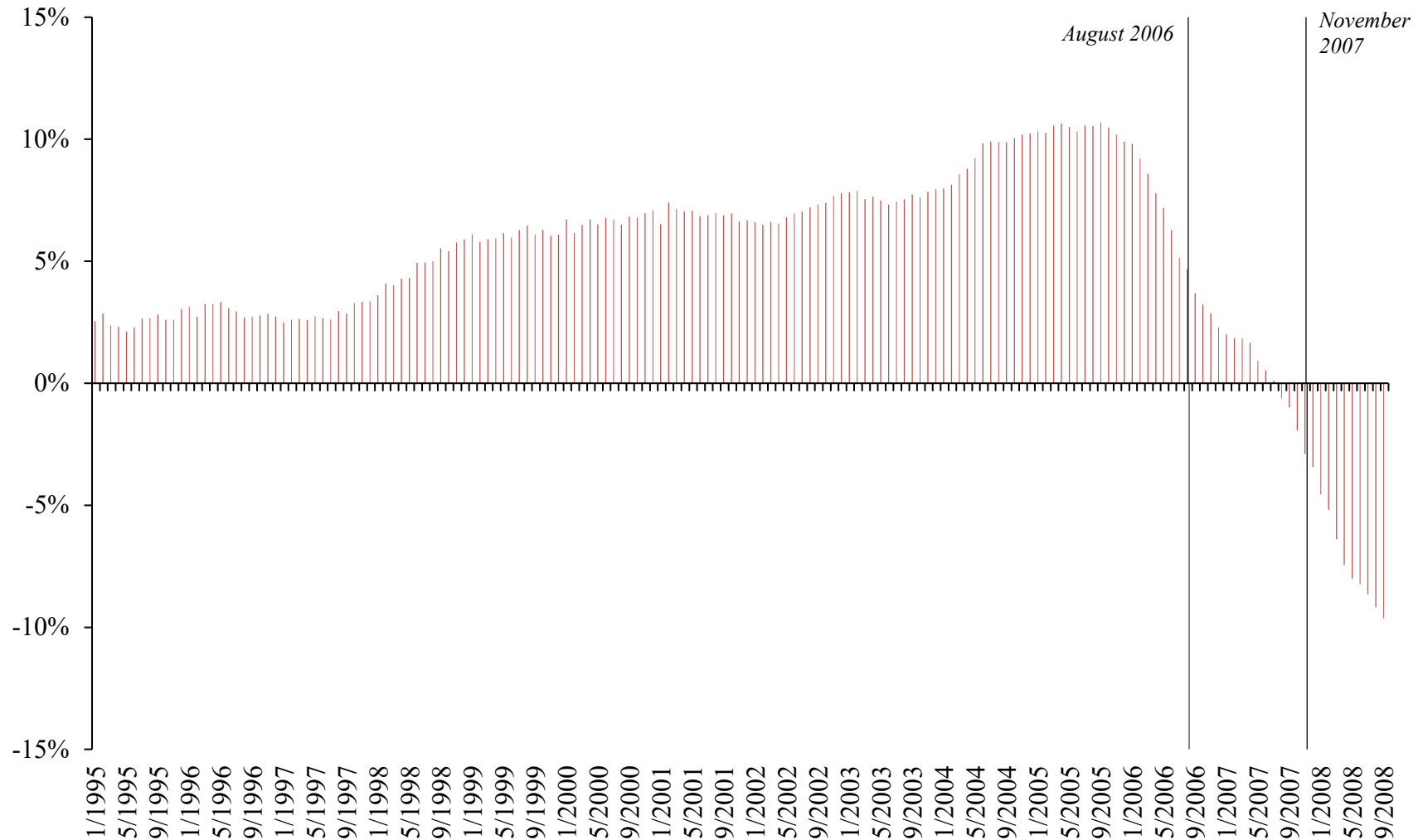
Notes and Sources: The above analysis is based on a market model estimated over August 9, 2007 to November 19, 2007, in which the daily close-to-close Freddie Mac stock logarithmic ("log") returns are regressed against an intercept term and the following variables: (1) the daily log returns of the S&P 500 Total Return Index; (2) the orthogonalized component of the S&P 500 Financials Total Return Index (i.e., the residuals from regressing the S&P 500 Financials Total Return Index log returns against the S&P 500 Total Return Index log returns); (3) the orthogonalized component of the log return on Fannie Mae stock (i.e., the residuals from the regressing the Fannie Mae common stock log returns against the log returns of the S&P 500 Total Return Index and the S&P Financials Total Return Index residuals). Fannie Mae and Freddie Mac data obtained from CRSP. Index data were obtained from Refinitiv Eikon. Freddie Mac and Fannie Mae stock returns are adjusted for dividends. The four alleged misrepresentation days in the TAC in the estimation period were excluded (August 30, September 10, 17, and November 7, 2007) from the model estimation. See Bajaj Class Cert Report, Appendix V listing alleged misrepresentation days, citing to the TAC. The t-statistic for the Cumulative Abnormal Return (CAR) was calculated as the sum of each day's abnormal (excess) log return divided by the regression standard error multiplied by the square root of the number of days (= 4).

Exhibit 1: Case Shiller "Nominal" U.S. Home Price Index (1990 - 2008)

Notes and Sources: <http://www.econ.yale.edu/~shiller/data/Fig3-1.xls>

Exhibit 2: Monthly FHFA House Price Index, Seasonally Adjusted Year-Over-Year Change in Monthly Values (1995 - 2008)

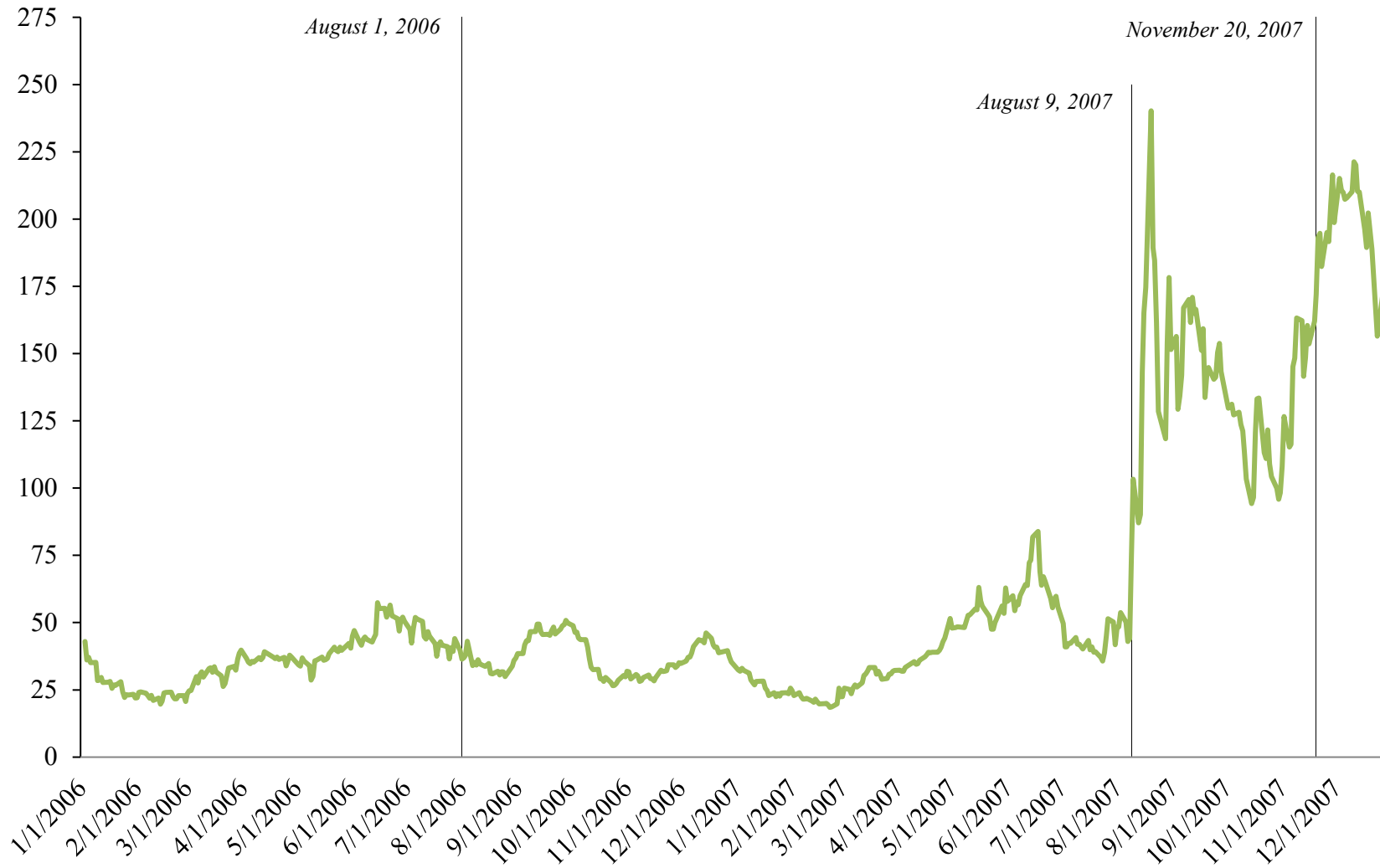
Year-Over-Year Change



Notes and Sources: Federal Housing Finance Agency (<https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx>). Year-over-year change is calculated from index values. Purchase-Only Index.

Exhibit 3: TED Spread (2006 - 2007)

Spread (bps)

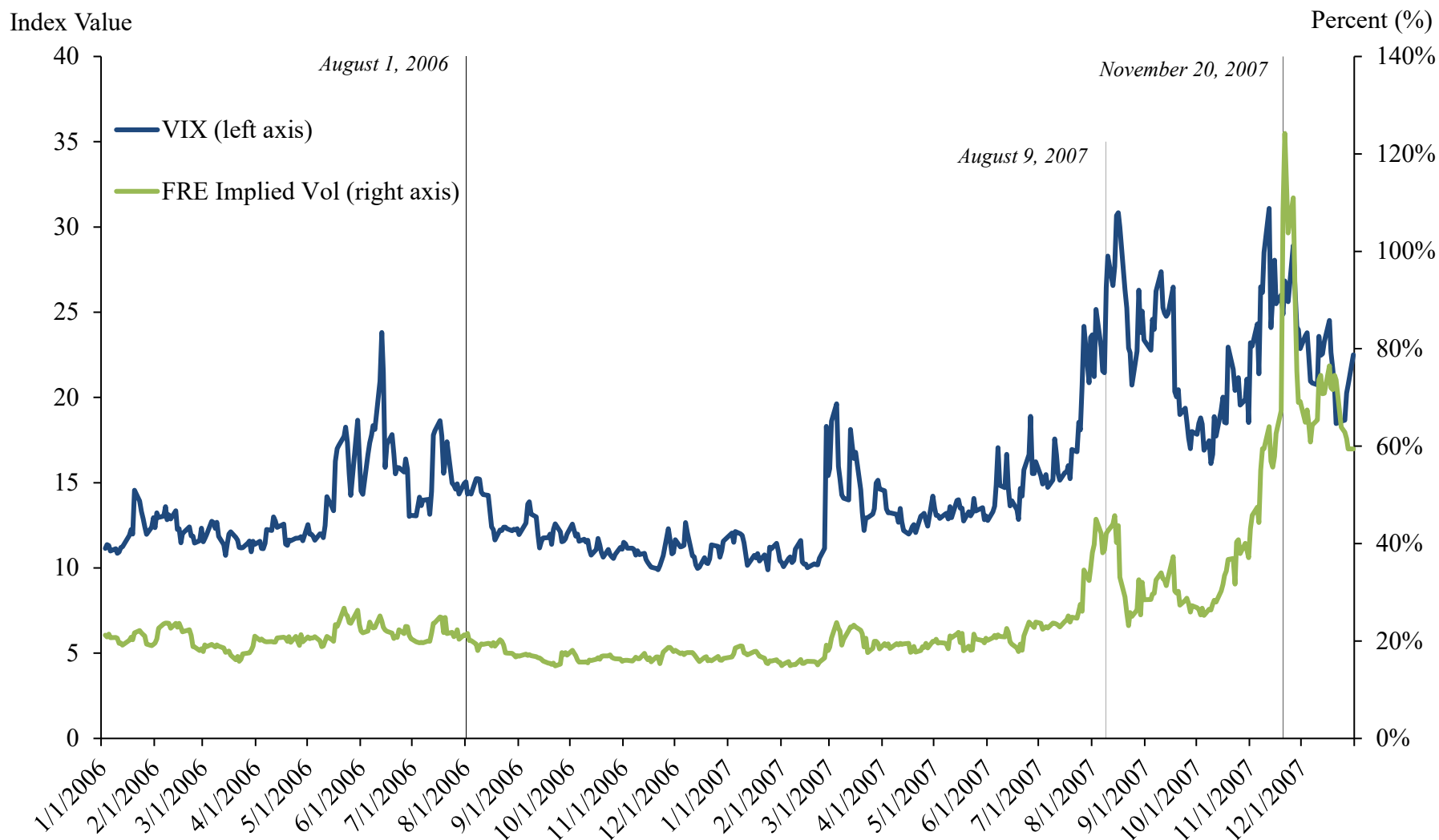


Notes and Sources: Bloomberg. "Calculated by taking the BBA LIBOR USD 3 Month minus the US Generic 3 Month Yield."

Exhibit 4: Bloomberg U.S. Agency Fixed Rate MBS Average OAS (2006 - 2007)

Notes and Sources: Bloomberg. The "Bloomberg US Mortgage Backed Securities (MBS) Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage."

Exhibit 5: Chicago Board Options Exchange Volatility Index ("VIX") and Freddie Mac 30-day Implied Volatility (2006 - 2007)



Notes and Sources: VIX data obtained from Bloomberg. FRE Implied Volatility obtained from OptionMetrics. Implied volatility is computed by OptionMetrics, a well-known provider of such data, through prices of 30-day call options traded on the Company's stock.

Exhibit 6A
Richard F. Syron Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|-----|-------------------------------------|-------------------|----------------|------------------|----------------|---------------|---------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Jun. 05, 2006 | Common Stock | Direct | A | | | | 364,171 |
| [1] | Dec. 31, 2006 | Common Stock | Direct | F | | 21,249 | \$67.90 | 342,922 |
| [2] | Mar. 29, 2007 | Common Stock | Direct | A | 107,824 | | * | 450,746 |
| [3] | Apr. 01, 2007 | Common Stock | Direct | F | | 7,979 | \$59.49 | 442,767 |
| [4] | May. 06, 2007 | Common Stock | Direct | F | | 8,193 | \$66.31 | 434,574 |
| [5] | Jun. 05, 2007 | Common Stock | Direct | F | | 12,742 | \$66.94 | 421,832 |
| [6] | Total during Relevant Period | | | | 107,824 | 50,163 | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, June 5, 2006, p.1.
 [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, December 31, 2006, p.1.
 [2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, March 29, 2007, p.1.
 [3] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, April 1, 2007, p.1.
 [4] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, May 6, 2007, p.1.
 [5] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Richard F. Syron, June 5, 2007, p.1.
 [6] = sum([2]:[6]).

- [d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
 Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
 See: <https://www.sec.gov/files/forms-3-4-5.pdf>

- [1] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [3] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on stock.
 [4] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [5] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.

- [g]
 [2] * Granted in consideration for services.

Exhibit 6B

Patricia L. Cook Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|------|-------------------------------------|-------------------|----------------|------------------|---------------|---------------|---------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Jun. 05, 2006 | | | | | | | 77,587 |
| [2] | Aug. 02, 2006 | Common Stock | Direct | F | | 1,759 | \$57.50 | 75,828 |
| [3] | Aug. 02, 2006 | Common Stock | Direct | F | | 1,946 | \$57.50 | 73,882 |
| [4] | Jan. 03, 2007 | Common Stock | Direct | S | | 4,258 | \$68.20 | 69,624 |
| [5] | Jan. 03, 2007 | Common Stock | Direct | S | | 2,847 | \$68.20 | 66,777 |
| [6] | Mar. 29, 2007 | Common Stock | Direct | A | 34,642 | | * | 101,419 |
| [7] | May. 06, 2007 | Common Stock | Direct | F | | 1,993 | \$66.31 | 99,426 |
| [8] | Jun. 05, 2007 | Common Stock | Direct | F | | 4,109 | \$66.94 | 95,317 |
| [9] | Aug. 02, 2007 | Common Stock | Direct | F | | 1,748 | \$56.61 | 93,569 |
| [10] | Aug. 02, 2007 | Common Stock | Direct | F | | 1,933 | \$56.61 | 91,636 |
| [11] | Total during Relevant Period | | | | 34,642 | 20,593 | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, June 5, 2006, p.1.
[2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2006, p.1.
[3] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2006, p.1.
[4] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, January 3, 2007, p.1.
[5] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, January 3, 2007, p.1.
[6] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, March 29, 2007, p.1.
[7] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, May 6, 2007, p.1.
[8] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, June 5, 2007, p.1.
[9] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2007, p.1.
[10] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Patricia L. Cook, August 2, 2007, p.1.
[11] = sum([2]:[10]).

[d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
See: <https://www.sec.gov/files/forms-3-4-5.pdf>

- [2] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[3] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[4] Shares sold pursuant to a Rule 10b5-1 Plan dated October 19, 2006.
[5] Shares sold pursuant to a Rule 10b5-1 Plan dated October 19, 2006.
[7] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[8] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[9] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
[10] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.

[g]
[6] * Granted in consideration for services.

Exhibit 6C

Eugene McQuade Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|-----|-------------------------------------|-------------------|----------------|------------------|---------------|---------------|---------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Jun. 05, 2006 | Common Stock | Direct | | | | | 209,456 |
| [2] | Sep. 01, 2006 | Common Stock | Direct | F | | 14,037 | \$63.61 | 195,419 |
| [3] | Mar. 29, 2007 | Common Stock | Direct | A | 71,778 | | * | 267,197 |
| [4] | May. 06, 2007 | Common Stock | Direct | F | | 5,977 | \$66.31 | 261,220 |
| [5] | Jun. 05, 2007 | Common Stock | Direct | F | | 9,290 | \$66.94 | 251,930 |
| [6] | Sep. 01, 2007 | Common Stock | Direct | F | | 13,419 | \$61.61 | 238,511 |
| [7] | Total during Relevant Period | | | | 71,778 | 42,723 | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, June 5, 2006, p.1.
 [2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, September 1, 2006, p.1.
 [3] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, March 29, 2007, p.1.
 [4] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, May 6, 2007, p.1.
 [5] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, June 5, 2007, p.1.
 [6] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Eugene McQuade, September 1, 2007, p.1.
 [7] = sum([2]:[6]).

- [d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
 Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
 See: <https://www.sec.gov/files/forms-3-4-5.pdf>

- [2] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [4] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [5] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.
 [6] Shares automatically retained by Freddie Mac to cover taxes associated with the lapse of restrictions on restricted stock award.

- [g]
 [3] *Granted in consideration for services.

Exhibit 6D

Anthony S. Pisel Form 4 disclosures during Relevant Period

| | Transaction date | Title of security | Ownership form | Transaction code | Acquired | Disposed | Price | Amount of securities beneficially owned after the transaction |
|-----|-------------------------------------|-------------------|----------------|------------------|----------------|----------|-------|---|
| | [a] | [b] | [c] | [d] | [e] | [f] | [g] | [h] |
| [1] | Dec. 07, 2006 | Common Stock | Direct | A | 78,940 | | * | 78,940 |
| [2] | Mar. 29, 2007 | Common Stock | Direct | A | 37,613 | | * | 116,553 |
| [3] | Total during Relevant Period | | | | 116,553 | - | | |

Notes and Sources:

- [1] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Anthony S. Pisel, December 7, 2006, p.1.
 [2] Federal Home Loan Mortgage Corporation, Statement of Changes in Beneficial Ownership, Form 4 for Anthony S. Pisel, March 29, 2007, p.1.
 [3] = sum([1]:[2]).
 [3] Relevant Period: August 1, 2006 to November 20, 2007.
- [d] Transaction code A: Grant, award, or other acquisition of securities from the company (such as an option)
 Transaction code F: Payment of exercise price or tax liability using portion of securities received from the company.
 See: <https://www.sec.gov/files/forms-3-4-5.pdf>

[g]

- [1] * In consideration for services.
 [2] * Granted in consideration for services.

BACKUP TABLE A.1.1

Total returns of Freddie Mac common stock, S&P 500 Index, S&P 500 Financials Index, and Fannie Mae common stock

August 8, 2007 to November 30, 2007

| Trading Date [a] | Freddie Mac ("FRE") | | S&P 500 | Financials | Fannie Mae ("FNM") | | Logarithmic Total Returns | | | | |
|------------------------|------------------------|----------------------|--------------|--------------|-----------------------|----------------------|---------------------------|---------|------------|--------|--------|
| | Price [b] | Divi- dend [c] | Total | Total | Price [f] | Divi- dend [g] | S&P 500 | | | | |
| | | | Return | Return | | | FRE | S&P 500 | Financials | FNM | |
| | | | Index [d] | Index [e] | | | [h] | [i] | [j] | [k] | |
| [1] | 08/08/07 | \$62.64 | \$0.00 | 2,333.24 | 616.99 | \$66.75 | \$0.00 | | | | |
| [2] | 08/09/07 | \$61.67 | \$0.00 | 2,264.50 | 593.87 | \$65.93 | \$0.00 | -1.56% | -2.99% | -3.82% | -1.24% |
| [3] | 08/10/07 | \$61.95 | \$0.00 | 2,265.36 | 593.16 | \$66.46 | \$0.00 | 0.45% | 0.04% | -0.12% | 0.80% |
| [4] | 08/13/07 | \$61.52 | \$0.00 | 2,264.58 | 588.39 | \$64.12 | \$0.00 | -0.70% | -0.03% | -0.81% | -3.58% |
| [5] | 08/14/07 | \$59.41 | \$0.00 | 2,223.71 | 574.36 | \$62.88 | \$0.00 | -3.49% | -1.82% | -2.41% | -1.95% |
| [6] | 08/15/07 | \$60.28 | \$0.00 | 2,193.40 | 568.79 | \$61.45 | \$0.00 | 1.45% | -1.37% | -0.98% | -2.30% |
| [7] | 08/16/07 | \$61.34 | \$0.00 | 2,200.61 | 588.80 | \$65.15 | \$0.00 | 1.74% | 0.33% | 3.46% | 5.85% |
| [8] | 08/17/07 | \$63.70 | \$0.00 | 2,254.68 | 610.14 | \$67.25 | \$0.00 | 3.78% | 2.43% | 3.56% | 3.17% |
| [9] | 08/20/07 | \$63.53 | \$0.00 | 2,254.07 | 605.22 | \$67.50 | \$0.00 | -0.27% | -0.03% | -0.81% | 0.37% |
| [10] | 08/21/07 | \$64.16 | \$0.00 | 2,256.52 | 608.10 | \$68.98 | \$0.00 | 0.99% | 0.11% | 0.47% | 2.17% |
| [11] | 08/22/07 | \$64.89 | \$0.00 | 2,283.09 | 613.14 | \$69.38 | \$0.00 | 1.13% | 1.17% | 0.83% | 0.58% |
| [12] | 08/23/07 | \$64.04 | \$0.00 | 2,280.68 | 610.41 | \$68.13 | \$0.00 | -1.32% | -0.11% | -0.45% | -1.82% |
| [13] | 08/24/07 | \$63.60 | \$0.00 | 2,307.22 | 613.76 | \$67.19 | \$0.00 | -0.69% | 1.16% | 0.55% | -1.39% |
| [14] | 08/27/07 | \$62.58 | \$0.00 | 2,287.62 | 605.38 | \$66.48 | \$0.00 | -1.62% | -0.85% | -1.37% | -1.06% |
| [15] | 08/28/07 | \$61.20 | \$0.00 | 2,234.02 | 585.80 | \$63.57 | \$0.00 | -2.23% | -2.37% | -3.29% | -4.48% |
| [16] | 08/29/07 | \$63.25 | \$0.00 | 2,283.58 | 596.78 | \$65.76 | \$0.00 | 3.29% | 2.19% | 1.86% | 3.39% |
| [17] | 08/30/07 | \$60.07 | \$0.00 | 2,274.16 | 590.16 | \$63.40 | \$0.00 | -5.16% | -0.41% | -1.12% | -3.65% |
| [18] | 08/31/07 | \$61.61 | \$0.00 | 2,299.71 | 599.12 | \$65.61 | \$0.00 | 2.53% | 1.12% | 1.51% | 3.43% |
| [19] | 09/04/07 | \$62.25 | \$0.00 | 2,323.83 | 606.11 | \$65.71 | \$0.00 | 1.03% | 1.04% | 1.16% | 0.15% |
| [20] | 09/05/07 | \$60.15 | \$0.00 | 2,298.16 | 594.26 | \$62.79 | \$0.00 | -3.43% | -1.11% | -1.97% | -4.55% |
| [21] | 09/06/07 | \$59.39 | \$0.00 | 2,308.35 | 593.07 | \$62.07 | \$0.00 | -1.27% | 0.44% | -0.20% | -1.15% |
| [22] | 09/07/07 | \$59.31 | \$0.00 | 2,269.32 | 584.47 | \$62.52 | \$0.00 | -0.13% | -1.70% | -1.46% | 0.72% |
| [23] | 09/10/07 | \$58.75 | \$0.00 | 2,266.51 | 583.94 | \$62.76 | \$0.00 | -0.95% | -0.12% | -0.09% | 0.38% |
| [24] | 09/11/07 | \$59.25 | \$0.00 | 2,297.41 | 591.72 | \$63.73 | \$0.00 | 0.85% | 1.35% | 1.32% | 1.53% |
| [25] | 09/12/07 | \$58.77 | \$0.00 | 2,298.14 | 590.61 | \$62.84 | \$0.00 | -0.81% | 0.03% | -0.19% | -1.41% |
| [26] | 09/13/07 | \$58.00 | \$0.50 | 2,317.63 | 600.15 | \$62.10 | \$0.00 | -0.46% | 0.84% | 1.60% | -1.18% |
| [27] | 09/14/07 | \$57.37 | \$0.00 | 2,318.11 | 599.89 | \$61.28 | \$0.00 | -1.09% | 0.02% | -0.04% | -1.33% |
| [28] | 09/17/07 | \$56.55 | \$0.00 | 2,306.25 | 595.41 | \$60.52 | \$0.00 | -1.44% | -0.51% | -0.75% | -1.25% |
| [29] | 09/18/07 | \$59.52 | \$0.00 | 2,373.63 | 621.93 | \$62.54 | \$0.00 | 5.12% | 2.88% | 4.36% | 3.28% |
| [30] | 09/19/07 | \$61.16 | \$0.00 | 2,388.15 | 625.64 | \$63.98 | \$0.00 | 2.72% | 0.61% | 0.60% | 2.28% |
| [31] | 09/20/07 | \$59.89 | \$0.00 | 2,372.61 | 614.79 | \$62.52 | \$0.00 | -2.10% | -0.65% | -1.75% | -2.31% |
| [32] | 09/21/07 | \$60.35 | \$0.00 | 2,383.55 | 616.25 | \$62.72 | \$0.00 | 0.77% | 0.46% | 0.24% | 0.32% |
| [33] | 09/24/07 | \$59.50 | \$0.00 | 2,371.03 | 608.66 | \$61.48 | \$0.00 | -1.42% | -0.53% | -1.24% | -2.00% |
| [34] | 09/25/07 | \$59.53 | \$0.00 | 2,370.26 | 606.73 | \$61.68 | \$0.00 | 0.05% | -0.03% | -0.32% | 0.32% |
| [35] | 09/26/07 | \$59.55 | \$0.00 | 2,383.53 | 610.43 | \$61.59 | \$0.00 | 0.03% | 0.56% | 0.61% | -0.15% |
| [36] | 09/27/07 | \$59.99 | \$0.00 | 2,392.92 | 615.23 | \$62.00 | \$0.00 | 0.74% | 0.39% | 0.78% | 0.66% |
| [37] | 09/28/07 | \$59.01 | \$0.00 | 2,385.72 | 612.65 | \$60.81 | \$0.00 | -1.65% | -0.30% | -0.42% | -1.94% |
| [38] | 10/01/07 | \$60.30 | \$0.00 | 2,417.44 | 625.39 | \$62.49 | \$0.00 | 2.16% | 1.32% | 2.06% | 2.73% |
| [39] | 10/02/07 | \$62.04 | \$0.00 | 2,416.83 | 630.64 | \$65.08 | \$0.00 | 2.84% | -0.03% | 0.84% | 4.06% |
| [40] | 10/03/07 | \$62.47 | \$0.00 | 2,406.30 | 631.06 | \$66.04 | \$0.00 | 0.69% | -0.44% | 0.07% | 1.46% |
| [41] | 10/04/07 | \$63.19 | \$0.00 | 2,411.41 | 632.55 | \$67.39 | \$0.00 | 1.15% | 0.21% | 0.24% | 2.02% |
| [42] | 10/05/07 | \$63.43 | \$0.00 | 2,435.16 | 640.30 | \$67.30 | \$0.00 | 0.38% | 0.98% | 1.22% | -0.13% |

BACKUP TABLE A.1.1

Total returns of Freddie Mac common stock, S&P 500 Index, S&P 500 Financials Index, and Fannie Mae common stock

August 8, 2007 to November 30, 2007

| Trading Date [a] | Freddie Mac ("FRE") | | S&P 500 | Financials | Fannie Mae ("FNM") | | Logarithmic Total Returns | | | | |
|------------------------|------------------------|----------------------|--------------|--------------|-----------------------|----------------------|---------------------------|---------|------------|--------|---------|
| | Price [b] | Divi- dend [c] | Total | Total | Price [f] | Divi- dend [g] | S&P 500 | | | | |
| | | | Return | Return | | | FRE | S&P 500 | Financials | FNM | |
| | | | Index [d] | Index [e] | | | [h] | [i] | [j] | [k] | |
| [43] | 10/08/07 | \$62.80 | \$0.00 | 2,427.33 | 635.00 | \$66.99 | \$0.00 | -1.00% | -0.32% | -0.83% | -0.46% |
| [44] | 10/09/07 | \$62.78 | \$0.00 | 2,447.03 | 640.27 | \$66.95 | \$0.00 | -0.03% | 0.81% | 0.83% | -0.06% |
| [45] | 10/10/07 | \$62.05 | \$0.00 | 2,443.02 | 634.12 | \$66.40 | \$0.00 | -1.17% | -0.16% | -0.97% | -0.82% |
| [46] | 10/11/07 | \$60.78 | \$0.00 | 2,430.55 | 632.69 | \$65.95 | \$0.00 | -2.07% | -0.51% | -0.23% | -0.68% |
| [47] | 10/12/07 | \$60.63 | \$0.00 | 2,442.12 | 632.43 | \$66.04 | \$0.00 | -0.25% | 0.48% | -0.04% | 0.14% |
| [48] | 10/15/07 | \$59.00 | \$0.00 | 2,421.67 | 620.82 | \$64.90 | \$0.00 | -2.73% | -0.84% | -1.85% | -1.74% |
| [49] | 10/16/07 | \$57.62 | \$0.00 | 2,405.76 | 609.29 | \$63.75 | \$0.00 | -2.37% | -0.66% | -1.87% | -1.79% |
| [50] | 10/17/07 | \$56.22 | \$0.00 | 2,410.22 | 608.42 | \$62.19 | \$0.00 | -2.46% | 0.19% | -0.14% | -2.48% |
| [51] | 10/18/07 | \$54.70 | \$0.00 | 2,408.46 | 601.89 | \$60.91 | \$0.00 | -2.74% | -0.07% | -1.08% | -2.08% |
| [52] | 10/19/07 | \$53.05 | \$0.00 | 2,346.78 | 584.24 | \$58.85 | \$0.00 | -3.06% | -2.59% | -2.98% | -3.44% |
| [53] | 10/22/07 | \$52.82 | \$0.00 | 2,355.74 | 589.89 | \$58.15 | \$0.00 | -0.43% | 0.38% | 0.96% | -1.20% |
| [54] | 10/23/07 | \$53.24 | \$0.00 | 2,376.47 | 593.64 | \$58.27 | \$0.00 | 0.79% | 0.88% | 0.63% | 0.21% |
| [55] | 10/24/07 | \$51.05 | \$0.00 | 2,370.71 | 589.01 | \$56.20 | \$0.00 | -4.20% | -0.24% | -0.78% | -3.62% |
| [56] | 10/25/07 | \$50.59 | \$0.00 | 2,368.43 | 585.33 | \$57.26 | \$0.00 | -0.91% | -0.10% | -0.63% | 1.87% |
| [57] | 10/26/07 | \$52.69 | \$0.00 | 2,401.07 | 600.19 | \$60.03 | \$0.00 | 4.07% | 1.37% | 2.51% | 4.72% |
| [58] | 10/29/07 | \$51.75 | \$0.00 | 2,410.33 | 600.05 | \$57.42 | \$0.50 | -1.80% | 0.38% | -0.02% | -3.58% |
| [59] | 10/30/07 | \$51.95 | \$0.00 | 2,394.81 | 596.82 | \$56.99 | \$0.00 | 0.39% | -0.65% | -0.54% | -0.75% |
| [60] | 10/31/07 | \$52.23 | \$0.00 | 2,423.67 | 601.56 | \$57.04 | \$0.00 | 0.54% | 1.20% | 0.79% | 0.09% |
| [61] | 11/01/07 | \$49.43 | \$0.00 | 2,360.21 | 574.25 | \$54.50 | \$0.00 | -5.51% | -2.65% | -4.65% | -4.56% |
| [62] | 11/02/07 | \$48.33 | \$0.00 | 2,362.21 | 564.98 | \$52.61 | \$0.00 | -2.25% | 0.08% | -1.63% | -3.53% |
| [63] | 11/05/07 | \$47.34 | \$0.00 | 2,350.69 | 557.06 | \$52.00 | \$0.00 | -2.07% | -0.49% | -1.41% | -1.17% |
| [64] | 11/06/07 | \$49.39 | \$0.00 | 2,379.05 | 566.63 | \$55.39 | \$0.00 | 4.24% | 1.20% | 1.70% | 6.32% |
| [65] | 11/07/07 | \$45.13 | \$0.00 | 2,310.41 | 538.24 | \$49.79 | \$0.00 | -9.02% | -2.93% | -5.14% | -10.66% |
| [66] | 11/08/07 | \$43.82 | \$0.00 | 2,309.18 | 540.69 | \$49.80 | \$0.00 | -2.95% | -0.05% | 0.45% | 0.02% |
| [67] | 11/09/07 | \$41.70 | \$0.00 | 2,276.26 | 541.46 | \$49.00 | \$0.00 | -4.96% | -1.44% | 0.14% | -1.62% |
| [68] | 11/12/07 | \$40.00 | \$0.00 | 2,253.53 | 542.26 | \$47.06 | \$0.00 | -4.16% | -1.00% | 0.15% | -4.04% |
| [69] | 11/13/07 | \$44.56 | \$0.00 | 2,319.86 | 568.97 | \$49.20 | \$0.00 | 10.80% | 2.90% | 4.81% | 4.45% |
| [70] | 11/14/07 | \$44.19 | \$0.00 | 2,304.06 | 565.52 | \$47.82 | \$0.00 | -0.83% | -0.68% | -0.61% | -2.84% |
| [71] | 11/15/07 | \$41.86 | \$0.00 | 2,273.73 | 548.18 | \$43.04 | \$0.00 | -5.42% | -1.33% | -3.11% | -10.53% |
| [72] | 11/16/07 | \$40.72 | \$0.00 | 2,285.67 | 544.03 | \$40.69 | \$0.00 | -2.76% | 0.52% | -0.76% | -5.61% |
| [73] | 11/19/07 | \$37.50 | \$0.00 | 2,245.81 | 527.71 | \$37.58 | \$0.00 | -8.24% | -1.76% | -3.05% | -7.95% |
| [74] | 11/20/07 | \$26.74 | \$0.00 | 2,256.02 | 520.86 | \$28.25 | \$0.00 | -33.82% | 0.45% | -1.31% | -28.54% |
| [75] | 11/21/07 | \$26.00 | \$0.00 | 2,220.21 | 509.33 | \$29.23 | \$0.00 | -2.81% | -1.60% | -2.24% | 3.41% |
| [76] | 11/23/07 | \$26.47 | \$0.00 | 2,257.95 | 525.02 | \$32.20 | \$0.00 | 1.79% | 1.69% | 3.03% | 9.68% |
| [77] | 11/26/07 | \$24.50 | \$0.00 | 2,205.49 | 503.76 | \$28.92 | \$0.00 | -7.73% | -2.35% | -4.13% | -10.74% |
| [78] | 11/27/07 | \$25.73 | \$0.00 | 2,238.52 | 517.01 | \$29.40 | \$0.00 | 4.90% | 1.49% | 2.60% | 1.65% |
| [79] | 11/28/07 | \$29.42 | \$0.00 | 2,303.17 | 543.47 | \$32.30 | \$0.00 | 13.40% | 2.85% | 4.99% | 9.41% |
| [80] | 11/29/07 | \$29.51 | \$0.00 | 2,304.43 | 539.40 | \$32.39 | \$0.00 | 0.31% | 0.05% | -0.75% | 0.28% |
| [81] | 11/30/07 | \$35.07 | \$0.00 | 2,322.34 | 555.01 | \$38.42 | \$0.00 | 17.26% | 0.77% | 2.85% | 17.07% |

Notes and Sources:

- [a] to [c] CRSP.
[d],[e] Refinitiv Eikon.
[f],[g] CRSP.
[h] $=([b]+[c])/(\text{price in [b] on a previous date per [a]})-1$.
[i] $=([d])/(\text{price in [d] on a previous date per [a]})-1$.
[j] $=([e])/(\text{price in [e] on a previous date per [a]})-1$.
[k] $=([f]+[g])/(\text{price in [f] on a previous date per [a]})-1$.

EXHIBIT

2

The New York Times | <https://www.nytimes.com/2007/11/21/business/21housing.html>

Loan Crisis Entangles Freddie Mac

By Michael M. Grynbaum

Nov. 21, 2007

Losses at Freddie Mac underscored the continuing turmoil in the housing industry yesterday, and other developments reinforced the sense that conditions would not improve soon.

Freddie Mac, the big mortgage finance company, posted a \$2 billion loss for the third quarter and warned that it might not have enough capital on hand to cover the mandatory reserves for its mortgage commitments.

The company has been battered by a rising wave of foreclosures tied to subprime mortgage defaults, and it is “seriously considering” cutting its stock dividend.

Freddie’s misfortune is particularly rattling because the company is considered something of a backstop for the lending industry. With its implied guarantee of government backing, the housing market looks to Freddie, and its bigger sibling, Fannie Mae, to provide stable credit and financing for a wide swath of mortgages.

But yesterday’s earnings report showed that even the gold standard of lending agencies was not immune to the toxic subprime securities that have infected much of the market.

The loss included a provision for credit losses of \$1.2 billion, and it wrote down the value of some assets by \$3.6 billion. And Freddie’s outlook remained cloudy: executives said they did not expect earnings to improve in the fourth quarter, and they suggested that the government would not lower its 30 percent threshold for Freddie’s reserves.

Shares of the company plummeted 28.7 percent, to \$26.74, its lowest level in 11 years, while shares of Fannie Mae dropped 24.8 percent. Freddie will seek advice from Goldman Sachs and Lehman Brothers for its short-term efforts to shore up its reserves.

While many analysts said the poor earnings suggested that subprime problems had spread to new corners of the mortgage market, some said that they did not anticipate a significant tightening in Freddie's lending standards.

"One of the reasons why they are trying to do a significant capital raise is they want to be out there continuing to provide credit," said Frederick Cannon, a managing director at Keefe, Bruyette & Woods, who covers the housing sector.

But the agencies' exposure could also restrict the government's ability to intervene in the market.

"It makes any potential large federal response that much more difficult," said Joseph Brusuelas, chief United States economist at IdeaGlobal. "If the federal government were to respond aggressively to a greater-than-expected downturn in the housing sector, it would rely on Fannie and Freddie to do a lot of the heavy lifting."

In Freddie's case, the company warned about more problems in the coming months. "Without doubt, 2007 has been an extremely difficult year for the country's housing and credit markets," Richard F. Syron, Freddie Mac's chairman and chief executive, said in a statement.

EXHIBIT

3

The New York Times

<https://www.nytimes.com/2007/11/22/business/worldbusiness/22iht-norris23.1.8431761.html>

Floyd Norris: From virtuous circle to vicious credit cycle

By Floyd Norris

Nov. 22, 2007

NEW YORK — It's not just subprime anymore. Freddie Mac, the U.S. government-sponsored mortgage lending enterprise, said this week that enough borrowers were defaulting on loans made this year or last that it needed to mark down the value of the loans by \$1.2 billion.

How many of those loans were subprime?

None. But that does not make the losses any less real.

Freddie Mac historically did not buy subprime loans. But that did not stop it from buying some truly dubious loans. The borrowers may not have qualified as subprime, but many of the loans should have raised questions before they were made.

"The underwriting standards declined," said Anthony Pisel, chief financial officer of Freddie Mac. "That was across the board."

Those who made loans and expected to sell them quickly did not care much about assuring that the loans would be repaid. It turns out that the financial wizards who made it easy to transfer risk also guaranteed that more risks would be taken. They produced such innovations as Nina loans, which, Pisel said, "found their way into prime space."

Nina loans?

The abbreviation stands for "No income, no assets." It does not mean the loans went to people without either income or assets, only that the borrowers were not asked if they had either. I had known about "stated income" loans - also known as "liars' loans" - in which the bank took a borrower's word for how much he or she earned. But I had not realized you could borrow money without even being asked about your income.

Starting this month, Freddie will not guarantee such loans, which appear to default more often than other loans.

Each week seems to turn up more evidence of just how wide open the credit markets were, particularly for mortgages. Freddie Mac reports that two-thirds of the reserves it has set aside for bad loans come from loans given in 2006 and 2007.

Freddie's principal business is buying loans, guaranteeing them and then selling securities backed by those loans. It is the only link in the chain that has any reason to care about credit quality, and it appears that it did not care very much.

A kinder way to look at it is that competition forced the company to lower its standards. Either way, Freddie this week released data showing how its standards eroded. None of the loans on its books from 2003 or earlier call for payments of interest only. Almost a quarter of the loans it bought this year had that characteristic.

Freddie's report of a \$2 billion loss in the third quarter sent its stock reeling and took with it that of its cousin and chief competitor, Fannie Mae. Both are likely to have to raise large amounts of capital to keep buying loans. That capital will not come cheap and will make it more important than ever that they have good profit margins. That, in turn, implies higher borrowing costs for those who do get mortgages.

Freddie needs to raise capital, in part because it expects to have a very bad fourth quarter and also because it has so far refused to take some losses. While it did not guarantee subprime loans, it did help to finance them by purchasing securities

backed by subprime mortgages. Freddie says it will not sell the securities and expects them to pay off in the end, so there is no need to report a loss on them. But it could not possibly sell them now for anything approaching what they cost.

Further, the \$1.2 billion in write-downs on recent mortgages, while less than a quarter of one percent of the mortgage pool in question, are only a start.

Those losses are from loans that are already in foreclosure or close to it, or from homes where default seems near because of job losses.

The virtuous circle of 2005 clearly made the economy appear stronger. Easy credit helped raise home prices. Rising home prices made it appear that loans to risky borrowers were safe and encouraged people to take out new loans to finance consumption. That spending helped the economy grow and persuaded companies to hire.

Or, as Pizzel told me, "As long as house prices were going up, it cured all evils."

The securitization market for mortgages is almost dead, save for those guaranteed by Fannie and Freddie. Banks that make loans now know that they may have to hold on to them, a fact that encourages prudence and discourages lending to those who most need loans.

Now we face the threat of the opposite, vicious, circle. Tight credit puts downward pressure on home prices. Lower home prices make it harder to refinance mortgages even for those with good credit, and discourage spending. That can cut corporate profits and lead to layoffs.

Today is known as "Black Friday" in U.S. retailing: the day after Thanksgiving that marks the start of holiday shopping season and that is supposed to be the day retailers finally get "into the black," or turn a profit.

But there are fears that this year the color black will instead describe consumer sentiment. During the past seven months, the Standard & Poor's 500 index is down 5 percent, while the S&P 500 department store index is off 42 percent.

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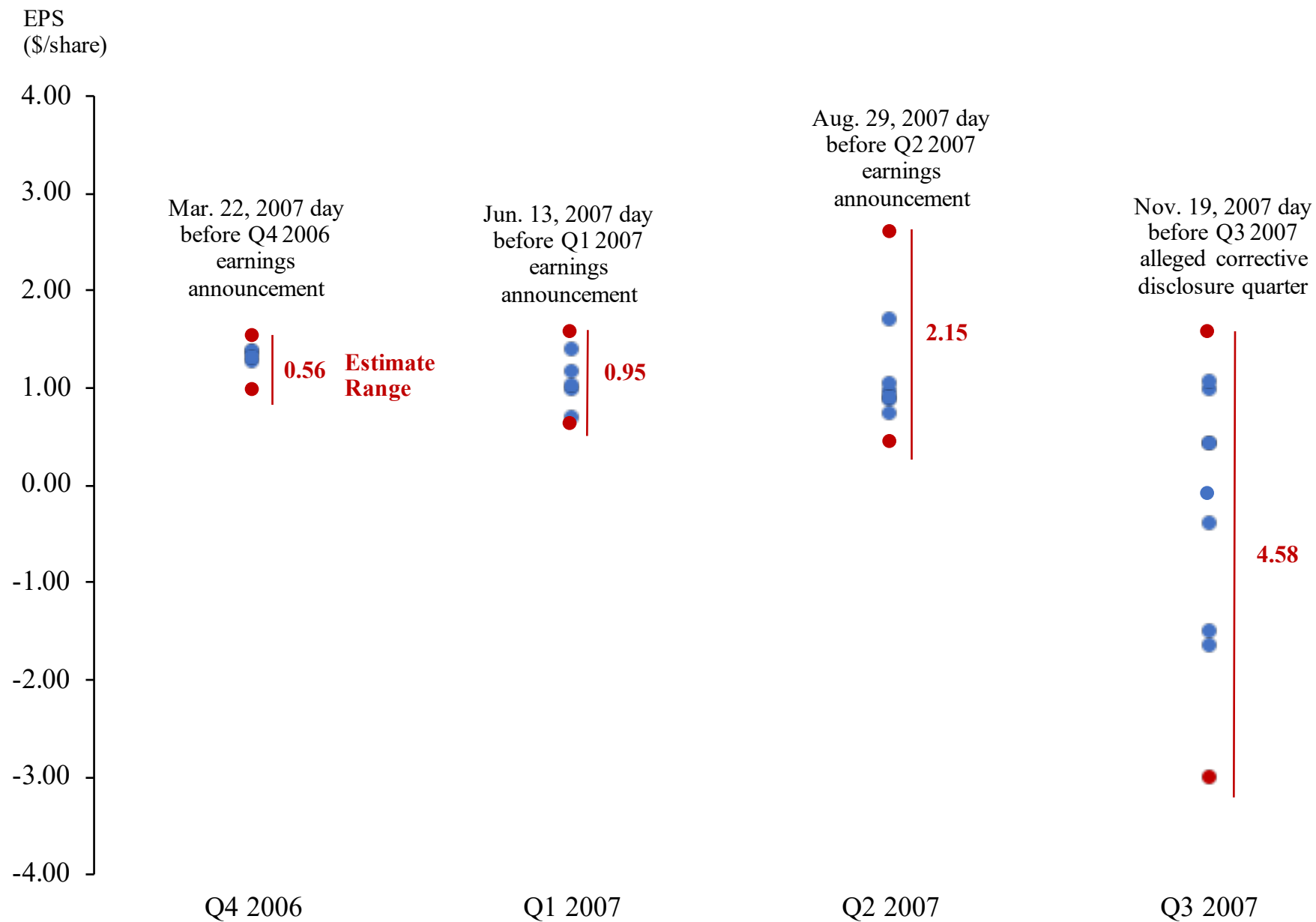
Floyd Norris: From virtuous circle to vicious credit cycle - The New York Times

Banks have not tightened up very much on credit cards. If access to credit were the only issue this holiday season, then sales would be healthy. But if consumers are scared, what began as a subprime crisis could spread to the entire U.S. economy.

A version of this article appears in print on in The International Herald Tribune

EXHIBIT

4



Notes and Sources: Refinitiv Eikon; Fox-Pitt, Kelton, "Buybacks Bolster Lackluster Results," March 23, 2007.

Analyst EPS Estimates for Freddie Mac as of One Trading Date Prior to Quarter End

| | Analyst | Q4 2006 | Q1 2007 | Q2 2007 | Q3 2007 |
|------|-------------------------|---------|---------|---------|---------|
| | [a] | [b] | [c] | [d] | [e] |
| [1] | B. Riley Securities | | 0.98 | 0.88 | -1.50 |
| [2] | Bank of America | 1.37 | 0.69 | 0.44 | -0.40 |
| [3] | Credit Suisse | | | | -1.65 |
| [4] | Fox-Pitt Kelton | 1.27 | 1.38 | 0.96 | 0.98 |
| [5] | Goldman Sachs | 0.96 | 1.57 | 1.70 | 1.57 |
| [6] | Keefe, Bruyette & Woods | | | 1.03 | |
| [7] | Lehman Brothers | 1.36 | 1.02 | 0.89 | 0.43 |
| [8] | Merrill Lynch | 1.31 | 1.17 | 0.73 | 1.06 |
| [9] | Miller Tabak | | 0.62 | 2.59 | 0.43 |
| [10] | Morgan Stanley | | | | -3.01 |
| [11] | Piper Sandler | | | | -0.10 |
| [12] | Prudential Equity Group | 1.52 | | | |
| [13] | Standard Deviation | 0.17 | 0.32 | 0.64 | 1.37 |
| [14] | Minimum | 0.96 | 0.62 | 0.44 | -3.01 |
| [15] | Maximum | 1.52 | 1.57 | 2.59 | 1.57 |
| [16] | Range | 0.56 | 0.95 | 2.15 | 4.58 |

Notes and Sources:

[1]-[12] Refinitiv Eikon. Analyst EPS estimate as of one trading date prior to earnings announcement.

[4][c] Fox-Pitt, Kelton, "Buybacks Bolster Lackluster Results," March 23, 2007.

[13] =STDEV.P([1]:[12]).

[14] =MIN([1]:[12]).

[15] =MAX([1]:[12]).

[16] =[15]-[14].

| Date | Period | Analyst | EPS Estimate |
|----------|----------|--|--------------|
| 3/22/07 | FY2006Q4 | BANC OF AMERICA SECURITIES | 1.37 |
| 3/22/07 | FY2006Q4 | FOX-PITT KELTON COCHRAN CARONIA WALLER | 1.27 |
| 3/22/07 | FY2006Q4 | LEHMAN BROTHERS | 1.36 |
| 3/22/07 | FY2006Q4 | Permission Denied 32 | 1.31 |
| 3/22/07 | FY2006Q4 | Permission Denied 73704 | 0.96 |
| 3/22/07 | FY2006Q4 | PRUDENTIAL EQUITY GROUP, LLC | 1.52 |
| 6/13/07 | FY2007Q1 | B. RILEY SECURITIES | 0.98 |
| 6/13/07 | FY2007Q1 | BANC OF AMERICA SECURITIES | 0.69 |
| 6/13/07 | FY2007Q1 | LEHMAN BROTHERS | 1.02 |
| 6/13/07 | FY2007Q1 | MILLER TABAK & CO. | 0.62 |
| 6/13/07 | FY2007Q1 | Permission Denied 32 | 1.17 |
| 6/13/07 | FY2007Q1 | Permission Denied 73704 | 1.57 |
| 8/29/07 | FY2007Q2 | B. RILEY SECURITIES | 0.88 |
| 8/29/07 | FY2007Q2 | BANC OF AMERICA SECURITIES | 0.44 |
| 8/29/07 | FY2007Q2 | FOX-PITT KELTON COCHRAN CARONIA WALLER | 0.96 |
| 8/29/07 | FY2007Q2 | LEHMAN BROTHERS | 0.89 |
| 8/29/07 | FY2007Q2 | MILLER TABAK & CO. | 2.59 |
| 8/29/07 | FY2007Q2 | Permission Denied 32 | 0.73 |
| 8/29/07 | FY2007Q2 | Permission Denied 36576 | 1.03 |
| 8/29/07 | FY2007Q2 | Permission Denied 73704 | 1.7 |
| 11/19/07 | FY2007Q3 | B. RILEY SECURITIES | -1.5 |
| 11/19/07 | FY2007Q3 | BANC OF AMERICA SECURITIES | -0.4 |
| 11/19/07 | FY2007Q3 | CREDIT SUISSE | -1.65 |
| 11/19/07 | FY2007Q3 | FOX-PITT KELTON COCHRAN CARONIA WALLER | 0.98 |
| 11/19/07 | FY2007Q3 | LEHMAN BROTHERS | 0.43 |
| 11/19/07 | FY2007Q3 | MILLER TABAK & CO. | 0.43 |
| 11/19/07 | FY2007Q3 | Permission Denied 23816 | -3.01 |
| 11/19/07 | FY2007Q3 | Permission Denied 32 | 1.06 |
| 11/19/07 | FY2007Q3 | Permission Denied 73704 | 1.57 |
| 11/19/07 | FY2007Q3 | PIPER SANDLER COMPANIES | -0.1 |

| Eikon Formulas | | | |
|----------------|----------------|--|--------------|
| Ticker | FMCC.PK | | |
| Start | 03/22/07 | | |
| Fields | TR.EPSEstValue | | |
| Fiscal years | FQ42006 | | |
| #NAME? | | | |
| | | | |
| Date | Period | Analyst | EPS Estimate |
| 3/22/07 | FY2006Q4 | BANC OF AMERICA SECURITIES | 1.37 |
| 3/22/07 | FY2006Q4 | FOX-PITT KELTON COCHRAN CARONIA WALLER | 1.27 |
| 3/22/07 | FY2006Q4 | LEHMAN BROTHERS | 1.36 |
| 3/22/07 | FY2006Q4 | Permission Denied 32 | 1.31 |
| 3/22/07 | FY2006Q4 | Permission Denied 73704 | 0.96 |
| 3/22/07 | FY2006Q4 | PRUDENTIAL EQUITY GROUP, LLC | 1.52 |

| Eikon Formulas | | | |
|----------------|----------------|----------------------------------|--------------|
| Ticker | FMCC.PK | | |
| Start | 06/13/07 | | |
| Fields | TR.EPSEstValue | | |
| Fiscal years | FQ12007 | | |
| #NAME? | | | |
| Date | Period | Analyst | EPS Estimate |
| 6/13/07 | FY2007Q1 | B. RILEY SECURITIES | 0.98 |
| 6/13/07 | FY2007Q1 | BANC OF AMERICA SECURITIES | 0.69 |
| 6/13/07 | FY2007Q1 | LEHMAN BROTHERS | 1.02 |
| 6/13/07 | FY2007Q1 | MILLER TABAK & CO. | 0.62 |
| 6/13/07 | FY2007Q1 | Permission Denied 32 | 1.17 |
| 6/13/07 | FY2007Q1 | Permission Denied 73704 | 1.57 |

| Eikon Formulas | | | |
|----------------|----------------|--|--------------|
| Ticker | FMCC.PK | | |
| Start | 8/29/07 | | |
| Fields | TR.EPSEstValue | | |
| Fiscal years | FQ22007 | | |
| #NAME? | | | |
| | | | |
| Date | Period | Analyst | EPS Estimate |
| 8/29/07 | FY2007Q2 | B. RILEY SECURITIES | 0.88 |
| 8/29/07 | FY2007Q2 | BANC OF AMERICA SECURITIES | 0.44 |
| 8/29/07 | FY2007Q2 | FOX-PITT KELTON COCHRAN CARONIA WALLER | 0.96 |
| 8/29/07 | FY2007Q2 | LEHMAN BROTHERS | 0.89 |
| 8/29/07 | FY2007Q2 | MILLER TABAK & CO. | 2.59 |
| 8/29/07 | FY2007Q2 | Permission Denied 32 | 0.73 |
| 8/29/07 | FY2007Q2 | Permission Denied 36576 | 1.03 |
| 8/29/07 | FY2007Q2 | Permission Denied 73704 | 1.7 |

| Eikon Formulas | | | |
|----------------|----------------|----------------|--------------|
| Ticker | FMCC.PK | | |
| Start | 11/19/07 | | |
| Fields | TR.EPSEstValue | | |
| Fiscal years | FQ32007 | | |
| #NAME? | | | |
| Date | Period | Analyst | EPS Estimate |
| 11/19/07 | FY2007Q3 | B. RILEY SECL | -1.5 |
| 11/19/07 | FY2007Q3 | BANC OF AMEI | -0.4 |
| 11/19/07 | FY2007Q3 | CREDIT SUISS | -1.65 |
| 11/19/07 | FY2007Q3 | FOX-PITT KEL | 0.98 |
| 11/19/07 | FY2007Q3 | LEHMAN BROT | 0.43 |
| 11/19/07 | FY2007Q3 | MILLER TABAK | 0.43 |
| 11/19/07 | FY2007Q3 | Permission Den | -3.01 |
| 11/19/07 | FY2007Q3 | Permission Den | 1.06 |
| 11/19/07 | FY2007Q3 | Permission Den | 1.57 |
| 11/19/07 | FY2007Q3 | PIPER SANDLE | -0.1 |

B. RILEY SECURITIES
BANC OF AMERICA SECURITIES
CREDIT SUISSE
FOX-PITT KELTON COCHRAN CARONIA WALLER
Permission Denied 73704
Permission Denied 36576
LEHMAN BROTHERS
Permission Denied 32
MILLER TABAK & CO.
Permission Denied 23816
PIPER SANDLER COMPANIES
PRUDENTIAL EQUITY GROUP, LLC

B. Riley Securities
Bank of America
Credit Suisse
Fox-Pitt Kelton
Goldman Sachs
Keefe, Bruyette & Woods
Lehman Brothers
Merrill Lynch
Miller Tabak
Morgan Stanley
Piper Sandler
Prudential Equity Group

EXHIBIT

5

DR. MUKESH BAJAJ
Ohio Public Employees vs Federal Home Loan

March 13, 2024

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| <p>1 IN THE UNITED STATES DISTRICT COURT</p> <p>2 NORTHERN DISTRICT OF OHIO</p> <p>3 EASTERN DIVISION</p> <p>4 -----</p> <p>5 OHIO PUBLIC EMPLOYEES RETIREMENT</p> <p>6 SYSTEM, on behalf of itself and</p> <p>7 all others similarly situated,</p> <p>8 Plaintiffs,</p> <p>9 vs. Case No. 4:08-CV-160</p> <p>10 FEDERAL HOME LOAN MORTGAGE</p> <p>11 CORPORATION A/K/A FREDDIE MAC,</p> <p>12 RICHARD F. SYRON, PATRICIA L.</p> <p>13 COOK, ANTHONY S. PISZEL, AND</p> <p>14 EUGENE M. MCQUADE,</p> <p>15 Defendants.</p> <p>16 -----</p> <p>17 ZOOM-CONFERENCE DEPOSITION OF DR. MUKESH BAJAJ</p> <p>18 Washington, D.C.</p> <p>19 Wednesday, March 13, 2024</p> <p>20 9:30 a.m. EST</p> <p>21 Reported By: Goldy Gold, RPR</p> <p>22 Job No. J11026706</p> | <p>1 A P P E A R A N C E S:</p> <p>2</p> <p>3 ON BEHALF OF OHIO PUBLIC EMPLOYEES RETIREMENT</p> <p>4 SYSTEM:</p> <p>5 BY: BILL MARKOVITZ, ESQ. (Appearing by Zoom)</p> <p>6 Markovits, Stock & Demarco, LLC</p> <p>7 119 East Court Street, Suite 530</p> <p>8 Cincinnati, OH 45202</p> <p>9 (513) 665-0200</p> <p>10 cstock@msdlegal.com</p> <p>11 wmarkovitz@msdlegal.com</p> <p>12 - and -</p> <p>13 BY: ROBERT R. SPARK, ESQ. (Appearing by Zoom)</p> <p>14 BY: RICHARD S. WAYNE, ESQ. (Appearing by Zoom)</p> <p>15 Strauss Troy</p> <p>16 150 East 4th Street. #4</p> <p>17 Cincinnati, OH 45202-4018</p> <p>18 (513) 621-2120</p> <p>19 rrsparks@strausstroy.com</p> <p>20 rwayne@strausstroy.com</p> <p>21</p> <p>22 ON BEHALF OF FEDERAL HOME LOAN MORTGAGE CORPORATION</p> <p>23 AND THE WITNESS:</p> <p>24</p> <p>25 BY: FREDERICK BLOCK, ESQ.</p> <p>26 Morgan, Lewis & Bockius LLP</p> <p>27 1111 Pennsylvania Avenue NW</p> <p>28 Washington, D.C. 20004</p> <p>29 202.739.5125</p> <p>30 fred.block@morganlewis.com</p> <p>31 - and -</p> <p>32 BY: VANESSA BROWN, ESQ.</p> <p>33 Morgan, Lewis & Bockius LLP</p> <p>34 2222 Market Street</p> <p>35 Philadelphia, Pennsylvania 19103</p> <p>36 vanessa.brown@morganlewis.com</p> |
| Page 2 | Page 4 |
| <p>1 IN THE UNITED STATES DISTRICT COURT</p> <p>2 NORTHERN DISTRICT OF OHIO</p> <p>3 EASTERN DIVISION</p> <p>4 -----</p> <p>5 OHIO PUBLIC EMPLOYEES RETIREMENT</p> <p>6 SYSTEM, on behalf of itself and</p> <p>7 all others similarly situated,</p> <p>8 Plaintiffs,</p> <p>9 vs. Case No. 4:08-CV-160</p> <p>10 FEDERAL HOME LOAN MORTGAGE</p> <p>11 CORPORATION A/K/A FREDDIE MAC,</p> <p>12 RICHARD F. SYRON, PATRICIA L.</p> <p>13 COOK, ANTHONY S. PISZEL, AND</p> <p>14 EUGENE M. MCQUADE,</p> <p>15 Defendants.</p> <p>16 -----</p> <p>17 VIDEO-CONFERENCE DEPOSITION OF</p> <p>18 DR. MUKESH BAJAJ, taken on behalf of the Plaintiff,</p> <p>19 at the law offices Morgan, Lewis & Bockius LLP,</p> <p>20 beginning at 9:35 a.m. EST and ending at 6:00 p.m.</p> <p>21 EST, on Wednesday, March 13, 2024, before Goldy Gold,</p> <p>22 a Registered Professional Reporter and Notary Public</p> <p>23 in and for the District of Columbia.</p> | <p>1 A P P E A R A N C E S:</p> <p>2</p> <p>3 ON BEHALF OF THE DEFENDANT RICHARD SYRON:</p> <p>4</p> <p>5 BY: FRANK R. VOLPE, ESQ. (Appearing by Zoom)</p> <p>6 Sidley Austin LLP</p> <p>7 1501 K Street, N.W.</p> <p>8 Washington, D.C. 20005</p> <p>9 202.736.8366</p> <p>10 fvolpe@sidley.com</p> <p>11</p> <p>12 ON BEHALF OF THE DEFENDANT ANTHONY S. PISZEL:</p> <p>13 BY: JAMES K. GOLDFARB, ESQ. (Appearing by Zoom)</p> <p>14 Davis Wright Tremaine</p> <p>15 1251 Avenue of the Americas, 21st Floor</p> <p>16 New York, New York 10020-1104</p> <p>17 212.880.3961</p> <p>18 Jamesgoldfarb@dwtd.com</p> <p>19</p> <p>20 ON BEHALF OF THE DEFENDANT EUGENE M. MCQUADE:</p> <p>21</p> <p>22 BY: CARLA GRAFF, ESQ. (Appearing by Zoom)</p> <p>23 Dechert LLP</p> <p>24 Cira Centre, 2929 Arch Street</p> <p>25 Philadelphia, Pennsylvania 19104-2808</p> <p>26 215.994.2513</p> <p>27 Carla.graff@dechert.com</p> <p>28</p> <p>29 ALSO PRESENT:</p> <p>30 Barry Michael Parsons, Freddie Mac</p> <p>31 Thomas Flack, Freddie Mac</p> <p>32 Victoria Curry, (Appearing by Zoom)</p> |

DR. MUKESH BAJAJ
Ohio Public Employees vs Federal Home Loan

March 13, 2024

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| <p>1 I N D E X 2 Deposition of Dr. Mukesh Bajaj 3 March 13, 2024 4 5 EXAMINATION BY PAGE 6 Mr. Markovits 6 7 8 9 E X H I B I T S 10 EXHIBITS DESCRIPTION PAGE 11 Exhibit 452 Mukesh Bajaj expert report and 9 appendices dated January 19, 2024 12 13 Exhibit 453 New York Times article titled 161 "Loan Crisis Entangles Freddie Mac 14 15 Exhibit 454 New York Times article titled 166 "Floyd Norris, From Virtuous Circle to Vicious Credit Cycle 16 17 Exhibit 455 FM OPERS 00238114 236 18 19 20 21 22</p> | <p>Page 5 1 feeling better. 2 A. Thank you. I wanted to start there by 3 appreciating the courtesies all counsel extended me 4 when I came down with COVID when my deposition was 5 scheduled on February 29th. 6 Q. That's fine. In a show of sympathy, I 7 came down with COVID this weekend, but I'm on the 8 mend. I was going to take this deposition from home, 9 but then my -- it just shows how good I am with 10 computers. My computer at home froze out yesterday 11 during the deposition, so I'm here isolating at the 12 office, hopefully. 13 A. Good luck. 14 Q. Thank you. We'll get through it. 15 MR. MARKOVITS: Fred, I know Jason is a 16 stickler usually at these depositions for 17 stipulations. 18 Would you like me to put them on the 19 record? 20 MR. BLOCK: Sure. 21 MR. MARKOVITS: All right. These are 22 the usual ones that I can recall: That all</p> |
| <p>Page 6 1 P R O C E E D I N G S 2 WHEREUPON, 3 MUKESH BAJAJ, Ph.D. 4 was called as a witness, having been duly sworn by a 5 Notary Public, was examined and testified as follows: 6 EXAMINATION 7 BY MR. MARKOVITS: 8 Q. Good morning, Dr. Bajaj. Could you 9 state your full name and address for the record? 10 A. Good morning, Counsel. Nice to see you 11 again. 12 Q. Good to see you. 13 A. My full name is Mukesh Bajaj. That's 14 M-u-k-e-s-h. Bajaj is spelled B-a-j-a-j. And did 15 you say you needed my address? 16 Q. Yes, please. 17 A. I don't remember our office address. Do 18 you need my home address? 19 Q. That will be fine. 20 A. Okay. It's 4615 Rockingham Court, 21 Oakland, California 94619. 22 Q. All right. Thank you. I'm glad you're</p> | <p>Page 8 1 objections, except as to form, and all motions 2 to strike are reserved until such time until 3 testimony is offered to the Court. 4 Is that agreeable? 5 MR. BLOCK: Agreed. 6 MR. MARKOVITS: And the parties agree to 7 the sufficiency of the credentials of the court 8 reporter? 9 MR. BLOCK: Correct. 10 MR. MARKOVITS: We agree the witness 11 will have 30 days after receiving the transcript 12 to read and sign before a notary public under 13 the pains and penalty of perjury, and if it 14 isn't signed within 30 days, it would be deemed 15 signed. 16 MR. BLOCK: That's correct. 17 MR. MARKOVITS: And objection on behalf 18 of one defendant will be an objection on behalf 19 of all defendants? 20 MR. BLOCK: Also agreed. 21 MR. MARKOVITS: All right. Any other 22 stipulations?</p> |

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| <p style="text-align: right;">Page 9</p> <p>1 MR. BLOCK: Not at this time.</p> <p>2 MR. MARKOVITS: And I assume those</p> <p>3 stipulations are fine with other defense</p> <p>4 counsel? If I hear nothing, I will assume</p> <p>5 assent.</p> <p>6 MR. GOLDFARB: Nothing.</p> <p>7 BY MR. MARKOVITS:</p> <p>8 Q. Dr. Bajaj, you've been deposed many</p> <p>9 times, including twice already by me in this case.</p> <p>10 I'm not going to waste time with a lot of</p> <p>11 preliminaries, except to ask: Is there any reason</p> <p>12 why you cannot give full, complete, and truthful</p> <p>13 testimony here today?</p> <p>14 A. No.</p> <p>15 Q. Thank you.</p> <p>16 MR. MARKOVITS: Could we mark as</p> <p>17 Exhibit 452 your current expert report and</p> <p>18 appendices that's dated January 19, 2024.</p> <p>19 [Exhibit 452, Mukesh Bajaj expert report</p> <p>20 and appendices dated January 19, 2024, was</p> <p>21 marked for identification.]</p> <p>22</p> | <p style="text-align: right;">Page 11</p> <p>1 report or its appendices?</p> <p>2 A. Well, I'd like to correct two</p> <p>3 typographical mistakes on page 40 -- or paragraph 40,</p> <p>4 let me check.</p> <p>5 I believe it is paragraph 40.</p> <p>6 Q. Okay.</p> <p>7 A. So first, in the middle of the</p> <p>8 paragraph, I think it's the second sentence, it says:</p> <p>9 "Exhibit 1 plus inflation-adjusted allocation home</p> <p>10 price index." The words "inflation adjusted" should</p> <p>11 be replaced by the word "nominal Case-Shiller home</p> <p>12 price index."</p> <p>13 (Reporter clarification.)</p> <p>14 THE WITNESS: Nominal. So instead of</p> <p>15 the words "inflation adjusted," it should say</p> <p>16 "nominal."</p> <p>17 And then it says: "Exhibit 2 plus</p> <p>18 monthly year-over-year change in nominal Freddie</p> <p>19 Mac U.S. house price index." Instead of the</p> <p>20 words "Freddie Mac," it should say "FHFA."</p> <p>21 The titles of the exhibit reflect the</p> <p>22 corrections I just made.</p> |
| <p style="text-align: right;">Page 10</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. All right. Dr. Bajaj, is Exhibit 452 a</p> <p>3 true and correct copy of your report?</p> <p>4 A. It appears to be.</p> <p>5 Q. If you could turn to page 121 of your</p> <p>6 report, is that your signature?</p> <p>7 A. Yes.</p> <p>8 Q. At the time you signed the report, was</p> <p>9 it in final form?</p> <p>10 A. Yes.</p> <p>11 Q. Have you had occasion since you signed</p> <p>12 your report to read it?</p> <p>13 A. I'm sorry. I couldn't hear the</p> <p>14 question.</p> <p>15 MR. BLOCK: You broke out real quickly.</p> <p>16 BY MR. MARKOVITS:</p> <p>17 Q. Have you had occasion since you signed</p> <p>18 the report to review the report?</p> <p>19 A. Yes.</p> <p>20 Q. How many times?</p> <p>21 A. A few times.</p> <p>22 Q. Are you aware of any mistakes in the</p> | <p style="text-align: right;">Page 12</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. Okay. Thank you. Anything else?</p> <p>3 A. Not that I know of.</p> <p>4 Q. If you could turn to paragraph 8 of your</p> <p>5 report, that indicates that you were assisted in its</p> <p>6 preparation by colleagues at Charles River</p> <p>7 Associates; is that correct?</p> <p>8 A. Yes.</p> <p>9 Q. And Charles River Associates is your</p> <p>10 current employer?</p> <p>11 A. I don't know if I would call it my</p> <p>12 current employer. I have a contractual arrangement</p> <p>13 where when I do expert work and need assistance, they</p> <p>14 provide their professionals to provide that</p> <p>15 assistance. I'm not an employee of Charles River</p> <p>16 Associates.</p> <p>17 Q. Are you listed on their website?</p> <p>18 A. I haven't checked lately, but I assume</p> <p>19 so.</p> <p>20 Q. Information received from your counsel</p> <p>21 indicates that Charles River Associates has billed</p> <p>22 close to 1.6 million, or about six to seven times the</p> |

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| <p style="text-align: right;">Page 13</p> <p>1 amount you billed on the project to date.</p> <p>2 Does that sound about right to you?</p> <p>3 A. I don't monitor how much Charles River</p> <p>4 Associates bills for services of its professionals,</p> <p>5 so I couldn't say one way or another.</p> <p>6 Q. Okay. What was Charles River</p> <p>7 Associates' role in the preparation of Exhibit 452?</p> <p>8 A. Well, their role, as far as it was known</p> <p>9 to me, was to assist me in research and drafting of</p> <p>10 the report that you have just marked as Exhibit 452.</p> <p>11 Q. And I would've guessed that. So I'm</p> <p>12 looking for something a little bit more granular,</p> <p>13 which is: What was their primary role that you</p> <p>14 directed them to assist you in the researching and</p> <p>15 drafting of the report?</p> <p>16 What type of analysis did they do, if</p> <p>17 any, for example?</p> <p>18 A. Well, people I've worked with worked</p> <p>19 under my direction and supervision. And when I</p> <p>20 wanted them to, for example, pull up data or charts</p> <p>21 on home price appreciation, they would do that. All</p> <p>22 the pretty looking charts that you'll see in the</p> | <p style="text-align: right;">Page 15</p> <p>1 finalized this report?</p> <p>2 A. Well, when I reviewed Mr. Shapiro's</p> <p>3 rebuttal report, he alleged that my criticisms of his</p> <p>4 report that are expressed in my report were somehow</p> <p>5 uninformed by a fuller review of all the documents</p> <p>6 that he cited in his report, besides the deposition</p> <p>7 transcript and the exhibits to deposition transcripts</p> <p>8 of Mr. Shapiro that I had already reviewed and</p> <p>9 disclosed, that I relied upon when drafting my</p> <p>10 report.</p> <p>11 So to address that concern, since then,</p> <p>12 I undertook a review of additional documents that</p> <p>13 were cited by Mr. Shapiro in his report to see if my</p> <p>14 conclusions that I expressed in my report -- marked</p> <p>15 as Exhibit 452 -- are robust, and they are.</p> <p>16 Q. Did you review all the documents that</p> <p>17 were cited in Mr. Shapiro's report?</p> <p>18 A. I believe so, yes.</p> <p>19 Q. Okay. As I understand it, Charles River</p> <p>20 Associates is being compensated for your work at the</p> <p>21 rate of \$1,500 per hour; is that correct?</p> <p>22 A. That is correct.</p> |
| <p style="text-align: right;">Page 14</p> <p>1 report, they are well beyond my Excel capabilities,</p> <p>2 at least currently. So they helped me prepare those.</p> <p>3 They helped me in proofreading my</p> <p>4 report. They helped me in background research on</p> <p>5 topics that I requested their assistance on. Those</p> <p>6 are the kind of activities that they assisted me.</p> <p>7 Q. And I assume, regardless of whether</p> <p>8 portions of the report were primarily drafted by you</p> <p>9 or someone else, that you have approved every word in</p> <p>10 the report, correct?</p> <p>11 A. Not only that. There is no portion of</p> <p>12 the report, other than the defendant's exhibit of</p> <p>13 appendix -- I forget what it is called -- regarding</p> <p>14 glossary of terms, that was drafted by anybody other</p> <p>15 than myself.</p> <p>16 Q. Okay. Have you or Charles River</p> <p>17 Associates conducted any analysis since you were</p> <p>18 asked to produce the report that's not reflected in</p> <p>19 this report?</p> <p>20 A. Yes.</p> <p>21 Q. What analysis have you performed since</p> <p>22 you were asked to do this report or since you</p> | <p style="text-align: right;">Page 16</p> <p>1 Q. Have you been paid?</p> <p>2 A. I don't track Charles River's</p> <p>3 receivables from the client. I understand that the</p> <p>4 client is in good standing. Charles River Associates</p> <p>5 pays me with a lag after a payment is collected from</p> <p>6 the client.</p> <p>7 I don't recall having received a payment</p> <p>8 from Charles River Associates yet, even though</p> <p>9 I couldn't be sure it could have already been</p> <p>10 deposited in my account.</p> <p>11 Q. Okay. Dr. Bajaj, could you turn to</p> <p>12 Appendix 2 of your report, Exhibit 452, which is the</p> <p>13 documents considered?</p> <p>14 A. I have it.</p> <p>15 Q. Okay. And there's 21 pages of documents</p> <p>16 considered.</p> <p>17 Is this the universe of documents you</p> <p>18 considered in forming your opinions in your report?</p> <p>19 A. Correct. I, of course, clarify that</p> <p>20 when documents considered lists depositions of</p> <p>21 Mr. Shapiro and Dr. Tabak, exhibits marked as part of</p> <p>22 those deposition transcripts were included in the</p> |

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| <p style="text-align: right;">Page 17</p> <p>1 documents considered by me in drafting my report.</p> <p>2 Q. Thank you for that clarification.</p> <p>3 Did you review all the documents listed</p> <p>4 in Appendix 2, personally?</p> <p>5 A. Anything that is cited in the report,</p> <p>6 I've carefully reviewed the language. Some of these</p> <p>7 documents are materials that I am familiar with, that</p> <p>8 I did not see the need to re-review.</p> <p>9 So, for example, two court opinions</p> <p>10 listed in Appendix 2, Basic, Inc. v. Levinson and</p> <p>11 Halliburton Co. v. Erica P. John Fund, Inc., both</p> <p>12 Supreme Court decisions. I don't believe I reviewed</p> <p>13 again before I drafted my report.</p> <p>14 But far as I can recall, I did review</p> <p>15 all the documents that have been considered -- that</p> <p>16 are on the documents considered list.</p> <p>17 Q. And that would include -- there's an</p> <p>18 extensive listing of analyst reports and news</p> <p>19 articles in Appendix 2.</p> <p>20 Did you review every one of those</p> <p>21 analyst reports and every one of those news articles?</p> <p>22 A. Yes.</p> | <p style="text-align: right;">Page 19</p> <p>1 various commercial data vendors that made those</p> <p>2 reports available. Some -- for example, if I</p> <p>3 remember correctly, by Goldman Sachs -- are not made</p> <p>4 available through commercial data vendors. Some of</p> <p>5 the documents were available to me because of my</p> <p>6 previous work in this case. But I did request a</p> <p>7 complete list of analyst reports that were part of</p> <p>8 the discovery record in this case, and that was to</p> <p>9 make sure that I have considered all analyst reports</p> <p>10 that are part of the discovery record, to the extent</p> <p>11 there were some holes in what was otherwise available</p> <p>12 to me.</p> <p>13 Q. Anything else that you can think of?</p> <p>14 A. I think I requested a copy of the Sixth</p> <p>15 Circuit decision that is cited in my report. I can</p> <p>16 quickly flip through to see if something else comes</p> <p>17 to mind.</p> <p>18 Oh, yes. I requested a copy of</p> <p>19 Dr. Okongwu's report and received that from counsel.</p> <p>20 As I sit here right now, I can't recall</p> <p>21 anything else that I requested from counsel.</p> <p>22 Q. Okay. And you addressed this</p> |
| <p style="text-align: right;">Page 18</p> <p>1 Q. Are there documents that you or</p> <p>2 Charles River Associates reviewed for the purpose of</p> <p>3 preparing your report that are not included in</p> <p>4 Appendix 2?</p> <p>5 A. Sorry. I missed your question. Could</p> <p>6 you repeat it?</p> <p>7 Q. Are there documents that you or Charles</p> <p>8 River Associates reviewed to the purposes of</p> <p>9 preparing your report that are not included in</p> <p>10 Appendix 2?</p> <p>11 A. Not to my knowledge.</p> <p>12 Q. In connection with preparing your</p> <p>13 report, did you ask your counsel or anyone else for</p> <p>14 any information or documents?</p> <p>15 A. Yes.</p> <p>16 Q. Let's start with your counsel.</p> <p>17 What information or documents did your</p> <p>18 -- did you ask your counsel to obtain for you?</p> <p>19 A. One example I remember is that I wanted</p> <p>20 to have a comprehensive list of financial analyst</p> <p>21 reports that are listed in the documents considered</p> <p>22 list. Some of those reports are available to us from</p> | <p style="text-align: right;">Page 20</p> <p>1 appreciably before or a few minutes ago, but you</p> <p>2 reviewed the reports of both Howard Shapiro and Dr.</p> <p>3 Tabak, right?</p> <p>4 A. Correct, I did.</p> <p>5 Q. And you said you went back after</p> <p>6 finalizing this report and looked at all the</p> <p>7 materials that Mr. Shapiro had cited in his report,</p> <p>8 right?</p> <p>9 A. Well, what I said, to be clearer, is</p> <p>10 that I had already reviewed exhibits that were marked</p> <p>11 during Mr. Shapiro's two depositions before I</p> <p>12 finalized this report. But in order to address</p> <p>13 Mr. Shapiro's allegation that, somehow, my opinions</p> <p>14 might change if I undertook a more fulsome review of</p> <p>15 other documents that he considered in writing his</p> <p>16 report, I went back and looked at documents that he</p> <p>17 cited in his report.</p> <p>18 Q. Right. That's what I -- that's what</p> <p>19 I said. But in any case, did you do the same with</p> <p>20 regard to Dr. Tabak? Did you review the materials</p> <p>21 that he cited in his report?</p> <p>22 A. As I sit here right now, I don't recall</p> |

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| <p style="text-align: right;">Page 21</p> <p>1 there being any relevant materials that he cited in</p> <p>2 his rebuttal report that I felt the need to review,</p> <p>3 for the same reason that I had not previously</p> <p>4 reviewed them.</p> <p>5 Q. You listed two of the documents that you</p> <p>6 reviewed, your prior reports in this case. One's</p> <p>7 dated December 14th, 2012, and the other,</p> <p>8 September 1st, 2017, correct?</p> <p>9 A. That is correct.</p> <p>10 Q. And you would agree with me that there's</p> <p>11 some overlap between Appendix 2 and the materials</p> <p>12 that you listed as being considered in your prior</p> <p>13 report, correct?</p> <p>14 MR. BLOCK: Objection to form.</p> <p>15 THE WITNESS: Yes, I agree, there is an</p> <p>16 overlap in materials considered.</p> <p>17 BY MR. MARKOVITS:</p> <p>18 Q. So to the extent materials were listed</p> <p>19 in those prior reports as being considered but are</p> <p>20 not listed here, would I be correct to assume that</p> <p>21 they were not considered for the purposes of</p> <p>22 preparing this report?</p> | <p style="text-align: right;">Page 23</p> <p>1 Would that be fair say?</p> <p>2 MR. GOLDFARB: Objection.</p> <p>3 THE WITNESS: I'd like to think of it as</p> <p>4 providing expert consulting services and</p> <p>5 producing this report, but you can characterize</p> <p>6 it as providing litigation support or however</p> <p>7 you choose.</p> <p>8 BY MR. MARKOVITS:</p> <p>9 Q. Let's put it this way. We'll use your</p> <p>10 terms. Is expert consulting service for the purposes</p> <p>11 of litigation primarily the work that you perform for</p> <p>12 Charles River Associates?</p> <p>13 A. That's fair, yes.</p> <p>14 Q. Some of the prior firms you worked with</p> <p>15 were Navigant, AFB, and LECG, correct?</p> <p>16 A. Yes.</p> <p>17 Q. For those firms, were you also primarily</p> <p>18 engaged in expert consulting services in the</p> <p>19 litigation context?</p> <p>20 A. Well, the only clarification I would add</p> <p>21 is sometimes I advise corporations on issues that may</p> <p>22 be in connection with their regulatory obligations or</p> |
| <p style="text-align: right;">Page 22</p> <p>1 A. As far as I can recall, I think that</p> <p>2 would be a fair inference, but I have not sat down</p> <p>3 and cross-tallied documents-considered lists in my</p> <p>4 previous two reports with this report. But I, of</p> <p>5 course, had available to me documents that I</p> <p>6 considered in my previous two reports. And the way I</p> <p>7 understand how documents-considered list is</p> <p>8 interpreted in this context, because those materials</p> <p>9 were available to me, they would be within the broad</p> <p>10 rubric of documents considered.</p> <p>11 Q. Have you spoken with anyone at Freddie</p> <p>12 Mac to obtain information relating to your report?</p> <p>13 A. No.</p> <p>14 Q. Let me switch topics here and talk a</p> <p>15 little bit about your background.</p> <p>16 According to the professional history</p> <p>17 attached to your report, you're a senior consultant</p> <p>18 with Charles River Associates; is that correct?</p> <p>19 A. That is correct, yes.</p> <p>20 Q. For this case, you're providing what's</p> <p>21 generally referred to as a litigation consulting</p> <p>22 service.</p> | <p style="text-align: right;">Page 24</p> <p>1 in evaluating whether there could be potential</p> <p>2 litigation. So I don't know whether that would</p> <p>3 necessarily be implied by the language you used, but</p> <p>4 I think for the most part, what you said is fair.</p> <p>5 Q. Yeah, and that's why I used the term</p> <p>6 "primarily," because I assumed you did some</p> <p>7 consulting that might not be directly</p> <p>8 litigation-related.</p> <p>9 Would "primarily" be a good description?</p> <p>10 A. It could be a fair description on</p> <p>11 average, of course, depending on the time period and</p> <p>12 the clients. There may be times when I do very</p> <p>13 little in connection with litigation per se, and a</p> <p>14 lot having to do with advising corporations, for</p> <p>15 example, on setting appropriate transfer prices for</p> <p>16 their cross-border transactions, which is much more</p> <p>17 in the rubric of their regulatory and tax compliance</p> <p>18 obligations, rather than litigation, even though any</p> <p>19 of those positions could, of course, be subject to</p> <p>20 future litigation.</p> <p>21 Q. Apart from providing expert testimony or</p> <p>22 expert consulting in the litigation context in cases</p> |

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| <p style="text-align: right;">Page 25</p> <p>1 such as this one, do you have any experience with the</p> <p>2 mortgage industry?</p> <p>3 A. Yes.</p> <p>4 Q. What is that?</p> <p>5 A. Well, first, since 2007, before the</p> <p>6 mortgage crisis became as severe as it ultimately</p> <p>7 did, I have been retained by, I would say, most of</p> <p>8 the big financial services companies that had</p> <p>9 exposure to mortgages or mortgage-backed securities</p> <p>10 or derivatives on mortgage-backed securities, and</p> <p>11 that work continued for many years and in this case,</p> <p>12 even what's now 16 years later. So I would say that</p> <p>13 exposed me quite a bit to mortgage business.</p> <p>14 Also, my wife and I are investors, and</p> <p>15 we invest in several real estate and real estate</p> <p>16 finance-related companies. And since 2018, we have</p> <p>17 been partial owners in an independent mortgage</p> <p>18 banking firm. Not that I run that company</p> <p>19 day-to-day, not that I consider myself as, the way</p> <p>20 insiders would call it, a mortgage guy. You know,</p> <p>21 I'm executive chairman of the firm, and my role is</p> <p>22 more in a stewardship kind of role. But, of course,</p> | <p style="text-align: right;">Page 27</p> <p>1 portfolio?</p> <p>2 A. Well, my wife and I run our own</p> <p>3 investment portfolio, but I don't offer my services</p> <p>4 as a portfolio manager to other investors.</p> <p>5 Q. And who gets the final say, you or your</p> <p>6 wife?</p> <p>7 A. It's always my wife.</p> <p>8 Q. Great answer, Doctor. Great answer.</p> <p>9 Have you ever published a securities</p> <p>10 analyst report providing a company analysis and</p> <p>11 recommendations?</p> <p>12 A. Can you repeat the question, please?</p> <p>13 Q. Sure. Have you ever published a</p> <p>14 securities analyst report, let's just say at the</p> <p>15 nature of the analyst reports that you listed in your</p> <p>16 Appendix 2?</p> <p>17 A. Well, I've never published an analyst</p> <p>18 report on behalf of an investment bank working as</p> <p>19 their investment analyst, if that's what your</p> <p>20 question is referring to.</p> <p>21 Q. Okay. Whether or not you were working</p> <p>22 for an investment bank, have you ever published a</p> |
| <p style="text-align: right;">Page 26</p> <p>1 I've been exposed to how mortgage business works as a</p> <p>2 result of that involvement.</p> <p>3 Q. Now, in Appendix 2, one category of</p> <p>4 documents considered were over 300 -- I think it's</p> <p>5 317 analyst reports related to Freddie Mac, correct?</p> <p>6 A. I haven't counted, but I'm happy to take</p> <p>7 your counting as true.</p> <p>8 Q. All right. Fair enough.</p> <p>9 And would you agree that these reports</p> <p>10 generally provide a financial analysis of Freddie Mac</p> <p>11 and make a recommendation to the investor regarding</p> <p>12 Freddie Mac common stock?</p> <p>13 MR. BLOCK: Objection to form.</p> <p>14 THE WITNESS: Well, some of these may</p> <p>15 sometimes be more educational in nature. But</p> <p>16 oftentimes, these reports do provide financial</p> <p>17 analysis and recommendations to investing</p> <p>18 public.</p> <p>19 BY MR. MARKOVITS:</p> <p>20 Q. And you are not a CFA, are you?</p> <p>21 A. No, I'm not.</p> <p>22 Q. Have you ever run an investment</p> | <p style="text-align: right;">Page 28</p> <p>1 securities analyst report similar to the ones in</p> <p>2 Appendix 2 that you listed under analyst reports?</p> <p>3 A. So leaving aside for a minute the last</p> <p>4 part of your question, similar to the ones listed in</p> <p>5 analyst reports, which leads you to what I said</p> <p>6 before -- in-house analyst reports published by</p> <p>7 employees of investment banks -- I considered this</p> <p>8 report and hundreds of other reports I have written</p> <p>9 to be financial analyst reports.</p> <p>10 It pertains to financial analysis of a</p> <p>11 company. It pertains to evaluating information</p> <p>12 available to the market and interpreting it, in this</p> <p>13 case, in light of the allegations that are at issue</p> <p>14 in this case.</p> <p>15 Q. Have you ever participated in the</p> <p>16 drafting of an analyst report and securities analyst</p> <p>17 report for the purposes of providing a recommendation</p> <p>18 to an investor?</p> <p>19 A. As I said, I have never been a portfolio</p> <p>20 manager offering recommendations to other investors</p> <p>21 or been an employee of an investment bank and</p> <p>22 publishing their in-house analyst reports on</p> |

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| <p style="text-align: right;">Page 29</p> <p>1 companies that I'm assigned to follow.</p> <p>2 Q. You mentioned you've provided some</p> <p>3 consulting services to institutions within the</p> <p>4 mortgage industry.</p> <p>5 In that context or in any other context,</p> <p>6 do you have any experience assessing a financial</p> <p>7 service company's exposure to nontraditional mortgage</p> <p>8 loans?</p> <p>9 A. Quite a bit, actually. As you can</p> <p>10 imagine, once it appeared that financial markets were</p> <p>11 in distress driven by mortgages, I was retained by</p> <p>12 some of the biggest investment banks to look at their</p> <p>13 exposure to mortgage-backed securities and</p> <p>14 derivatives on those mortgage-backed securities, to</p> <p>15 advise them on how they were valuing those securities</p> <p>16 and to consider various risks that their exposure to</p> <p>17 some securities could pose to those institutions.</p> <p>18 Q. In that context or any other context, do</p> <p>19 you have any experience in evaluating the loan</p> <p>20 analysis software used by financial companies?</p> <p>21 MR. BLOCK: Objection to form.</p> <p>22 THE WITNESS: So I would say in a broad</p> | <p style="text-align: right;">Page 31</p> <p>1 Q. Do you have any experience assessing a</p> <p>2 financial services company's fraud detection</p> <p>3 capabilities?</p> <p>4 A. Again, those issues were, of course,</p> <p>5 part of the overall evaluation when I was engaged by</p> <p>6 various financial servicing companies. And as an</p> <p>7 investor in a mortgage banking company, of course, I</p> <p>8 pay attention to whether there are some payer risks</p> <p>9 or frauds embedded in mortgages a company produces.</p> <p>10 So I am aware of those topics in that sense.</p> <p>11 Q. Your CV lists some publications and</p> <p>12 working papers you were involved in.</p> <p>13 Was the topic of any of those</p> <p>14 publications or working papers the mortgage industry?</p> <p>15 A. Well, I did coauthor a piece with my</p> <p>16 wife in 1993 that's listed here, "Beyond Mere</p> <p>17 Compliance." That's when she used to work with a</p> <p>18 mortgage company, and we worked together on that</p> <p>19 piece. So that was definitely about mortgage</p> <p>20 companies and quality control procedures that,</p> <p>21 ideally, should be going beyond mere letter of the</p> <p>22 regulatory compliance issues that a mortgage company</p> |
| <p style="text-align: right;">Page 30</p> <p>1 sense, yes. For example, many of the companies</p> <p>2 use, in addition to third-party marks that they</p> <p>3 obtain to value their mortgage-related</p> <p>4 exposures, their own fundamental valuation</p> <p>5 models, and I have worked with those models.</p> <p>6 I have worked with models that are</p> <p>7 designed to analyze structured, mortgage-backed</p> <p>8 securities, such as True Intex. I have, in that</p> <p>9 sense, worked with a lot of mortgage loan</p> <p>10 valuation models.</p> <p>11 BY MR. MARKOVITS:</p> <p>12 Q. Okay. Do you have any experience in</p> <p>13 assessing a financial service company's underwriting</p> <p>14 standards?</p> <p>15 A. If you are asking me whether I have been</p> <p>16 a practicing professional underwriter of mortgages,</p> <p>17 the answer is no. But, of course, a company's</p> <p>18 underwriting standards are part and parcel of its</p> <p>19 credit risk evaluation. And I'd say I do have</p> <p>20 experience in understanding credit risk implications</p> <p>21 of underwriting policies and models used by mortgage</p> <p>22 companies.</p> | <p style="text-align: right;">Page 32</p> <p>1 faces.</p> <p>2 Q. Anything other than that 1993 article?</p> <p>3 A. No. The rest of the publications there</p> <p>4 are more targeted to -- are more in the nature of</p> <p>5 academic writings on financial economics and not</p> <p>6 particular to mortgage business per se.</p> <p>7 Q. Was the content of any of your</p> <p>8 publications or working papers related to how</p> <p>9 securities analysts perform their roles?</p> <p>10 A. I'm sorry. Could you repeat your</p> <p>11 question again?</p> <p>12 Q. Was the content of any of your</p> <p>13 publications or working papers related to how</p> <p>14 security analysts perform their roles?</p> <p>15 A. Did you say "context" or "content"? I'm</p> <p>16 sorry. I couldn't hear.</p> <p>17 Q. Content.</p> <p>18 A. I wouldn't say so.</p> <p>19 Q. Dr. Bajaj, I'm turning to another topic.</p> <p>20 I'm happy to go on or we could take a short break if</p> <p>21 you'd like. Whatever you prefer.</p> <p>22 A. I think a short break would be</p> |

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| <p style="text-align: right;">Page 33</p> <p>1 wonderful. Thank you.</p> <p>2 MR. MARKOVITS: Off the record.</p> <p>3 (Brief recess.)</p> <p>4 MR. MARKOVITS: Back on the record.</p> <p>5 BY MR. MARKOVITS:</p> <p>6 Q. Dr. Bajaj, I'd like to turn now to the</p> <p>7 question of what opinions you're intending to express</p> <p>8 if the case moves forward.</p> <p>9 If can you turn to page 11 of your</p> <p>10 report, paragraph 22, you provide a summary of</p> <p>11 opinions and you list five opinions; is that correct?</p> <p>12 A. That is correct.</p> <p>13 Q. Are those five opinions, as expressed in</p> <p>14 more detail throughout the report, a complete</p> <p>15 statement of the opinions you will express moving</p> <p>16 forward?</p> <p>17 A. Well, I will answer, to the best of my</p> <p>18 ability, all the questions I'm asked. And to the</p> <p>19 extent they elicit opinions, that will depend on the</p> <p>20 question I'm asked. But the five opinions that you</p> <p>21 refer to encapsulate my opinions in this case as of</p> <p>22 now.</p> | <p style="text-align: right;">Page 35</p> <p>1 case, and I did offer some testimony in that</p> <p>2 connection.</p> <p>3 And, of course, there is nothing in my</p> <p>4 2012 report that is in any way inconsistent with any</p> <p>5 of the opinions I'm offering in this report. And to</p> <p>6 the extent any of my work in connection with my 2012</p> <p>7 report is relevant, I would be perfectly happy to</p> <p>8 address any question that would be directed at that</p> <p>9 work.</p> <p>10 Q. Let me try to narrow it down this way.</p> <p>11 In your 2012 report, you gave an opinion</p> <p>12 regarding materiality. Are you intending, as this</p> <p>13 case moves forward, to provide an opinion that the</p> <p>14 misrepresentations and omissions that were alleged by</p> <p>15 OPERS in this case are not material?</p> <p>16 A. Well, I am a financial economist. I</p> <p>17 understand that ultimate determination of materiality</p> <p>18 as a legal term of art is for the trier of fact. But</p> <p>19 I do, of course, in this report and my earlier</p> <p>20 reports, address economic issues that are pertinent</p> <p>21 to the trier of fact's ultimate determination on</p> <p>22 materiality.</p> |
| <p style="text-align: right;">Page 34</p> <p>1 Q. And we discussed earlier that you</p> <p>2 previously submitted reports in this case in 2012, I</p> <p>3 think it was, and in 2017.</p> <p>4 Are you incorporating any prior opinions</p> <p>5 you've given in this case?</p> <p>6 A. Just one moment, please. Yes, there</p> <p>7 were 2012 and '17, and as I say in my report that --</p> <p>8 in paragraph 21, "I've been asked by counsel for</p> <p>9 Freddie Mac to be prepared to offer the opinions I've</p> <p>10 previously offered at class certification stage of</p> <p>11 this case at trial, if necessary and appropriate.</p> <p>12 I'm prepared to do so. And I, accordingly,</p> <p>13 incorporate my opinions in those reports by</p> <p>14 reference."</p> <p>15 Does that answer your question?</p> <p>16 Q. Perhaps. So in the class certification</p> <p>17 stage, are you referring both to your 2012 and 2017</p> <p>18 reports?</p> <p>19 A. So I think the class certification stage</p> <p>20 is the 2017 report. But I recall in the last hearing</p> <p>21 on this matter in Youngstown, you brought up my work</p> <p>22 in the 2012 matter, which is a different but related</p> | <p style="text-align: right;">Page 36</p> <p>1 The other thing to note is, if I recall</p> <p>2 correctly, in my previous reports that were both</p> <p>3 during class certification stage, there was analysis</p> <p>4 of economic significance that would be pertinent to</p> <p>5 final determination on materiality. And my</p> <p>6 recollection is that at some point in time, there was</p> <p>7 a Supreme Court decision that said that those</p> <p>8 considerations should be reserved for the merits</p> <p>9 stage of the case.</p> <p>10 So in my 2017 report, I think what I</p> <p>11 said was limited by the relevant Supreme Court</p> <p>12 decision. That's my recollection.</p> <p>13 Q. Doctor, is it fair to say that a common</p> <p>14 theme throughout your reports, including your current</p> <p>15 report, relates to Freddie Mac's disclosures during</p> <p>16 the relevant period?</p> <p>17 A. Well, I would say not disclosures per</p> <p>18 se, but disclosures that are essential to conducting</p> <p>19 the analysis on economic significance of alleged</p> <p>20 misstatements or loss causation analysis. Obviously,</p> <p>21 you cannot, as a financial economist, offer an</p> <p>22 opinion on those topics without considering what the</p> |

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| <p style="text-align: right;">Page 37</p> <p>1 market knew already as a result of Freddie Mac's 2 public disclosures or other publicly available 3 information. And that would be a common theme in 4 these reports. 5 Q. All right. And, for example, on 6 pages -- I think it's 28 to 49 of your report, it's 7 headed on 4(c): "Freddie Mac disclosures during the 8 relevant period provided detailed information about 9 the guaranteed and retained portfolios and reflected 10 the changing mortgage market environment and growing 11 risk." 12 Did I read that correctly? 13 A. Yes. 14 Q. You list -- going back to paragraph 11 15 of your report, you list, basically, a summary of 16 OPERS' allegations relating to misrepresentations and 17 omissions. 18 You would agree that those allegations 19 that you reflect there in paragraph 11 relate, in 20 part, to Freddie Mac's exposure to subprime and other 21 nontraditional loans, to its underwriting, to its 22 loan analysis software, to its fraud detection, and</p> | <p style="text-align: right;">Page 39</p> <p>1 during this period were misleading, are you? 2 A. Well, I think I do address that topic in 3 the context of my evaluation from an economic 4 perspective of allegations in the complaint and 5 Dr. Tabak and Mr. Shapiro's reports, that when an 6 allegation is made that Freddie Mac's disclosures 7 were misleading, that allegation is inconsistent with 8 disclosures Freddie Mac did make and other publicly 9 available information. So, in that sense, I do 10 address whether or not the disclosures at issue were 11 allegedly misleading. 12 Q. And what research or analysis did you do 13 to determine whether or not the disclosures relating 14 to the subprime and nontraditional loans were 15 misleading? 16 MR. BLOCK: Objection to form. 17 THE WITNESS: I think that's a very 18 broad question and pretty much describes the sum 19 and substance of the first 119 pages of my 20 121-page report. Throughout that report, I lay 21 out various documents that demonstrated Freddie 22 Mac's public disclosures on topics that</p> |
| <p style="text-align: right;">Page 38</p> <p>1 to its capital position? 2 A. Paragraph 11 speaks for itself. And 3 what you said in your question seems to reasonably 4 closely track the five items listed in paragraph 11. 5 Q. Let's break that down a little. 6 One subject of OPERS' allegations 7 regarding misrepresentations and omissions during the 8 relevant period is Freddie Mac's exposure to risk of 9 loss from subprime and other nontraditional 10 mortgages, correct? 11 A. I think that's a fair statement. 12 Q. You're not providing an opinion on 13 whether Freddie Mac's disclosures relating to its 14 exposure to subprime and other nontraditional loans 15 during this period were accurate, are you? 16 A. I'm not opining on truth or falsity of 17 Freddie Mac's disclosures, if that's what you're 18 referring to. 19 Q. That is. Thank you. 20 You're not providing an opinion on 21 whether Freddie Mac's disclosures relating to its 22 exposure to subprime and other nontraditional loans</p> | <p style="text-align: right;">Page 40</p> <p>1 allegedly surprised the market. 2 I lay out public information that was 3 well-known in the marketplace, such as 4 developing risk, that were discussed by market 5 participants and were there for everybody to 6 see, as well as being reflected in various 7 Freddie Mac's financial statement disclosures. 8 I conduct various analyses that are all, 9 in a broad sense, related to addressing the 10 primary thrust of the plaintiff's complaint, as 11 I see it, that somehow what happened on 12 November 20th was, quote-unquote, 13 materialization of previously undisclosed risk. 14 BY MR. MARKOVITS: 15 Q. Did you do any investigation into the 16 internal documents of Freddie Mac to determine to 17 what extent internal assessments by Freddie Mac were 18 consistent with their public external disclosures? 19 MR. BLOCK: Objection to form. 20 THE WITNESS: Yes. 21 BY MR. MARKOVITS: 22 Q. And was your conclusion, based on that</p> |

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| <p style="text-align: right;">Page 41</p> <p>1 investigation, that they were consistent?</p> <p>2 A. What I would say is, again, I didn't</p> <p>3 opine on truth or falsity of any disclosures. But I</p> <p>4 did not find any evidence, including evidence cited</p> <p>5 by Mr. Shapiro, for example, supportive of the</p> <p>6 allegation that somehow Freddie Mac's internal</p> <p>7 deliberations were inconsistent with and, hence, made</p> <p>8 false or misleading Freddie Mac's external</p> <p>9 statements.</p> <p>10 Q. And is that an area of economic</p> <p>11 expertise or simply a matter of judgment for the jury</p> <p>12 to make?</p> <p>13 MR. GOLDFARB: Objection.</p> <p>14 THE WITNESS: Well, I would say it is an</p> <p>15 area where a financial economist, evaluating</p> <p>16 those documents and interpreting them in the</p> <p>17 context of financial markets and allegations at</p> <p>18 issue in this case, is hopefully helpful to the</p> <p>19 jury to reach the ultimate conclusion on the</p> <p>20 fact-finding role that the jury has.</p> <p>21 BY MR. MARKOVITS:</p> <p>22 Q. Are you providing an opinion on whether</p> | <p style="text-align: right;">Page 43</p> <p>1 My question was: Are you going -- I</p> <p>2 need to understand what your opinions are going to be</p> <p>3 going forward. You know this, right?</p> <p>4 A. Yes.</p> <p>5 Q. Okay. So what I'm trying to nail down</p> <p>6 here, are you going to provide an opinion on whether</p> <p>7 Freddie Mac's disclosures about subprime and</p> <p>8 nontraditional loans during the relevant period did</p> <p>9 or did not omit important information?</p> <p>10 MR. BLOCK: Objection to form.</p> <p>11 THE WITNESS: Counsel, I'm trying to be</p> <p>12 responsive, and I answered that. My opinion</p> <p>13 would be not on ultimate truth or falsity, but</p> <p>14 that I did not see any evidence that would be</p> <p>15 consistent with the allegation that Freddie Mac</p> <p>16 made misleading or false statements by omitting</p> <p>17 certain relevant economic information.</p> <p>18 BY MR. MARKOVITS:</p> <p>19 Q. I think it was a "yes" or "no" question,</p> <p>20 but we'll move on.</p> <p>21 A. Okay.</p> <p>22 Q. Another subject of OPERS' allegations is</p> |
| <p style="text-align: right;">Page 42</p> <p>1 Freddie Mac's disclosures relating to its exposure to</p> <p>2 subprime and other nontraditional loans during the</p> <p>3 relevant period omitted important information?</p> <p>4 A. Can you repeat your question again,</p> <p>5 please?</p> <p>6 Q. Are you providing an opinion on whether</p> <p>7 Freddie Mac's disclosures relating to its exposure to</p> <p>8 subprime and other nontraditional loans during the</p> <p>9 relevant period omitted important information?</p> <p>10 A. As I said before, Counsel, I'm not</p> <p>11 offering any opinion on truth or falsity of Freddie</p> <p>12 Mac's disclosure. But in my extensive review of</p> <p>13 Freddie Mac's disclosures and information publicly</p> <p>14 available, as well as my review of internal documents</p> <p>15 that Mr. Shapiro claims show that Freddie Mac's</p> <p>16 external statements were somehow false or misleading,</p> <p>17 led me to conclude that I did not see any evidence in</p> <p>18 the record that I reviewed that would lead me to</p> <p>19 conclude that Freddie Mac's disclosures during the</p> <p>20 relevant period were false or misleading.</p> <p>21 Q. Yeah, but that wasn't my question,</p> <p>22 Doctor.</p> | <p style="text-align: right;">Page 44</p> <p>1 whether Freddie Mac engaged in misrepresentations and</p> <p>2 omissions during the relevant period regarding its</p> <p>3 underwriting guidelines and adherence to those</p> <p>4 guidelines, correct?</p> <p>5 A. I'm sorry, are you referring to --</p> <p>6 MR. BLOCK: You're back to paragraph 11,</p> <p>7 right, Bill?</p> <p>8 MR. MARKOVITS: Yes.</p> <p>9 BY MR. MARKOVITS:</p> <p>10 Q. If you look at 11, Roman II.</p> <p>11 You understand that one of the subjects</p> <p>12 of OPERS' allegations is whether Freddie Mac engaged</p> <p>13 in misrepresentations and omissions during the</p> <p>14 relevant period regarding its underwriting guidelines</p> <p>15 and defendants' adherence to those guidelines,</p> <p>16 correct?</p> <p>17 A. Yes.</p> <p>18 Q. And you're not providing an opinion on</p> <p>19 whether Freddie Mac's disclosures relating to its</p> <p>20 underwriting guidelines and adherence to those</p> <p>21 guidelines during the relevant period were accurate,</p> <p>22 correct?</p> |

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| <p style="text-align: right;">Page 45</p> <p>1 A. Well, again, I'd have to give you a 2 similar answer, that I'm not going to opine on the 3 ultimate determination of fact on that allegation. 4 But having reviewed all the record that I have 5 reviewed, including documents relied upon by 6 Mr. Shapiro, I did not find any evidence that would 7 be consistent with the said allegation. 8 Q. And is that an opinion you intend to 9 give, that, "I've reviewed the evidence in this case 10 today and I've done my own analysis, and I've seen 11 nothing that, in my opinion, would suggest that 12 Freddie Mac's disclosures relating to its 13 underwriting and adherence to its underwriting were 14 inaccurate"? 15 A. Well, I will answer the questions I'm 16 asked, and if I'm asked a question to elicit the 17 answer that I previously provided, I will be ready to 18 do so. 19 Q. Yeah. But so you understand, purpose of 20 this report is, in part, to set forth the opinions 21 that you intend to give so that we can understand 22 what opinions you intend to give. Provided under the</p> | <p style="text-align: right;">Page 47</p> <p>1 If that's what he intends -- an opinion 2 he intends to give, I need to know so then I can 3 inquire, all right, what's your basis? What 4 have you done? What's your methodology? 5 If he doesn't intend to give that 6 opinion, we'll move on. 7 MR. BLOCK: So what is the question? 8 BY MR. MARKOVITS: 9 Q. Did he intend to give an opinion that 10 Freddie Mac's disclosures relating to its 11 underwriting guidelines and its adherence to those 12 guidelines during the relevant period were accurate? 13 A. Well, as I just heard the question, it 14 was in third-party, but I assume you wanted to ask me 15 that question. And what are -- 16 Q. I've been asking you that question. 17 A. Okay. 18 Q. But go ahead. 19 A. As I said before, I'm not going to offer 20 an opinion on whether or not Freddie Mac's disclosure 21 on the subject were true or false. I do, if asked, 22 intend to offer an opinion that, based on my review</p> |
| <p style="text-align: right;">Page 46</p> <p>1 civil rules, you provide the opinions you intend to 2 give and the basis and the methodology supporting 3 them. 4 So what I'm asking here is -- whether 5 you're asked by us or not -- I'm asking you now: Do 6 you intend to give an opinion that the disclosures by 7 Freddie Mac relating to its underwriting guidelines 8 and its adherence to those guidelines were accurate? 9 MR. BLOCK: Objection to form. 10 Bill, wouldn't it depend what you do 11 with Shapiro? Because I think that's the 12 disconnect here. He's responding to 13 Mr. Shapiro's opinions. 14 MR. MARKOVITS: Well, if he's responding 15 -- he knows what Mr. Shapiro's opinions are. If 16 he intends to respond to Mr. Shapiro by giving 17 the opinion that "I've looked at all the 18 evidence. And based on the evidence, in my 19 opinion, Freddie Mac's disclosures relating to 20 its underwriting guidelines and its adherence to 21 those guidelines were accurate," fine. That's 22 all I'm asking.</p> | <p style="text-align: right;">Page 48</p> <p>1 of the record that I reviewed, I did not see any 2 evidence of such falsity. 3 Q. You did no investigation to determine 4 whether its disclosures relating to underwriting and 5 its adherence to its underwriting standards were true 6 or false, correct? 7 A. I don't believe I can agree with what 8 you're asking. I, of course, did analysis and 9 reviewed documents to address the question about 10 alleged falsity of Freddie Mac's underwriting 11 guidelines and its adherence to those guidelines. 12 Q. And let's explore that. 13 Did you, for example, ask Freddie Mac, 14 or ask your counsel to obtain from Freddie Mac, 15 information regarding the extent to which Freddie Mac 16 was adhering to its underwriting guidelines during 17 the relevant period? 18 A. So I think the following -- 19 Q. Can you answer "yes" or "no," first, 20 Doctor? 21 Did you ask counsel or ask Freddie Mac 22 to provide you with the information from which you</p> |

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| <p style="text-align: right;">Page 49</p> <p>1 could determine the extent to which Freddie Mac was</p> <p>2 adhering to its underwriting guidelines during the</p> <p>3 relevant period?</p> <p>4 MR. BLOCK: Objection to form.</p> <p>5 THE WITNESS: Yes.</p> <p>6 BY MR. MARKOVITS:</p> <p>7 Q. What information did you request?</p> <p>8 A. Well, for example, I requested materials</p> <p>9 that Mr. Shapiro cited in his report in order to</p> <p>10 evaluate the merits of Mr. Shapiro's purported</p> <p>11 analysis on that issue.</p> <p>12 Q. Other than materials cited in</p> <p>13 Mr. Shapiro's report, did you ask Freddie Mac or</p> <p>14 anyone for materials to indicate the extent to which</p> <p>15 Freddie Mac was adhering to its underwriting</p> <p>16 guidelines during the relevant period?</p> <p>17 A. Again, I would say, yes, in the sense</p> <p>18 that I carefully reviewed Freddie Mac's disclosures</p> <p>19 about its underwriting practices. I informed myself</p> <p>20 further of the fact, for example, that Freddie Mac</p> <p>21 was not per se, in the business of underwriting</p> <p>22 loans. It was, in fact, prohibited by its charter</p> | <p style="text-align: right;">Page 51</p> <p>1 underwriting guidelines.</p> <p>2 In fact, Freddie Mac made extensive</p> <p>3 disclosures in its 2005 and 2006 annual financial</p> <p>4 statements on the subject.</p> <p>5 Q. Yes. Could you answer my question,</p> <p>6 Doctor? What percentage of loans during the relevant</p> <p>7 period met Freddie Mac's underwriting guidelines? Do</p> <p>8 you know?</p> <p>9 A. If your question is about a certain</p> <p>10 quantitative percentage, I don't know one way or</p> <p>11 another that any loans that Freddie Mac bought did</p> <p>12 not adhere to its underwriting guideline.</p> <p>13 Q. Do you know that any did?</p> <p>14 A. Freddie Mac made extensive disclosures</p> <p>15 that it followed those underwriting guidelines, that</p> <p>16 it had specific contracts with specific originators</p> <p>17 of the loans that sometimes differed from those</p> <p>18 guidelines.</p> <p>19 Q. Do you know that any -- do you know that</p> <p>20 any did, Doctor? You said you don't know that any</p> <p>21 didn't.</p> <p>22 Do you know that any did?</p> |
| <p style="text-align: right;">Page 50</p> <p>1 from originating loans, that its business model</p> <p>2 relied on third parties producing loans that they</p> <p>3 provided reps and warranties were consistent with its</p> <p>4 guidelines, and those parties' contracts with Freddie</p> <p>5 Mac.</p> <p>6 I learned about Freddie Mac's</p> <p>7 disclosures about use of AUS used by Freddie Mac and</p> <p>8 other AUSs that were prevalent in the marketplace.</p> <p>9 So I did do a fair amount of work to evaluate the</p> <p>10 allegation that you're referring to.</p> <p>11 Q. Did you determine the extent to which,</p> <p>12 during the relevant period, Freddie Mac was adhering</p> <p>13 to its own underwriting guidelines?</p> <p>14 A. In the sense that I have described in</p> <p>15 answer to your several previous questions, yes.</p> <p>16 Q. What percentage of loans that -- that</p> <p>17 Freddie Mac purchased or guaranteed during the</p> <p>18 relevant period met its own underwriting guidelines?</p> <p>19 A. I had not seen any evidence in the</p> <p>20 record, including evidence cited by Mr. Shapiro or in</p> <p>21 the Third Amended Complaint, that a certain</p> <p>22 percentage of Freddie Mac's loans did not meet its</p> | <p style="text-align: right;">Page 52</p> <p>1 A. Counsel, I don't mean to frustrate you.</p> <p>2 I am trying to be responsive while not giving</p> <p>3 misleading answers. Maybe you can ask me a narrower</p> <p>4 question so you get the answer that you're trying to</p> <p>5 elicit.</p> <p>6 Q. Did you ask Freddie Mac for any</p> <p>7 information that would show to what extent they</p> <p>8 followed their underwriting guidelines during the</p> <p>9 relevant period?</p> <p>10 A. No.</p> <p>11 Q. Another subject of OPERS' allegations is</p> <p>12 whether Freddie Mac engaged in misrepresentations or</p> <p>13 omissions regarding its loan analysis software during</p> <p>14 the relevant period.</p> <p>15 Again, you're not providing an opinion</p> <p>16 on whether Freddie Mac's disclosures relating to its</p> <p>17 loan analysis software during the period were</p> <p>18 accurate, correct?</p> <p>19 A. I'm not testifying to truth or falsity</p> <p>20 on any of these alleged misrepresentations, if that</p> <p>21 answers your question.</p> <p>22 Q. Okay. We'll go with that to speed</p> |

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| <p style="text-align: right;">Page 53</p> <p>1 things up a little.</p> <p>2 A. I'm happy to help.</p> <p>3 Q. Doctor, can you turn to paragraph 61 of</p> <p>4 your report? It's in conjunction with a general</p> <p>5 theme we talked about earlier.</p> <p>6 You assert, generally, that Freddie Mac</p> <p>7 disclosed key credit characteristics of a single</p> <p>8 payout rate guarantee portfolio in detail during the</p> <p>9 relevant period, correct?</p> <p>10 A. I think that's a fair characterization.</p> <p>11 Q. Okay. And the factors that you cite as</p> <p>12 key factors are FICO scores -- and I think this in</p> <p>13 the next paragraph -- FICO scores, LTV ratios, loans</p> <p>14 for particular purposes, loans for particular types</p> <p>15 of property, and loans by occupancy type, correct?</p> <p>16 A. Yes. In addition to loan types, such as</p> <p>17 its investment in interest-only arms -- interest-only</p> <p>18 loans, its investment in Alt-A loans --</p> <p>19 (Reporter clarification.)</p> <p>20 THE WITNESS: Alt-A. A for agency,</p> <p>21 I think. In reference to its investments in its</p> <p>22 retained portfolio, in mortgage-backed</p> | <p style="text-align: right;">Page 55</p> <p>1 correct?</p> <p>2 A. That is correct, yes.</p> <p>3 Q. Is that Federal Reserve bulletin</p> <p>4 assessing or discussing the key characteristics,</p> <p>5 credit-risk characteristics for prime loans?</p> <p>6 A. I'd have to see the paper to answer</p> <p>7 specific questions about language in that paper.</p> <p>8 Q. Fair enough.</p> <p>9 Do you think that the 1996 bulletin was</p> <p>10 addressing subprime and nontraditional loans, like</p> <p>11 the ones we see for the relevant period?</p> <p>12 MR. BLOCK: Objection to form.</p> <p>13 THE WITNESS: Well, as an economist,</p> <p>14 whether a loan is labeled prime or subprime, the</p> <p>15 credit risk of the loan, regardless of its</p> <p>16 label, depends on the type of loan product, the</p> <p>17 characteristics of the borrower, the type of</p> <p>18 property, and design features of the loan</p> <p>19 product. That was as true in 1996 as in 2007,</p> <p>20 as remains true today.</p> <p>21 So my citation was meant to convey that,</p> <p>22 from an economic perspective, characteristics</p> |
| <p style="text-align: right;">Page 54</p> <p>1 securities that were triple-A rated and backed</p> <p>2 by subprime loans, its investment in --</p> <p>3 BY MR. MARKOVITS:</p> <p>4 Q. Let me just stop you there for a second,</p> <p>5 Doctor, because I think we're getting afield from my</p> <p>6 question.</p> <p>7 A. Okay.</p> <p>8 Q. In paragraph 62, you list some</p> <p>9 characteristics. And in paragraph 62 of your report,</p> <p>10 the characteristics that you list for a</p> <p>11 single-family, guaranty portfolio are FICO scores,</p> <p>12 LTD ratios, loans for particular purposes, loans for</p> <p>13 a particular type of property, and loans by occupancy</p> <p>14 type, correct?</p> <p>15 A. Yes, correct.</p> <p>16 Q. And then in paragraph 63, you say:</p> <p>17 "These characteristics are widely recognized as key</p> <p>18 factors in assessing the credit risk related to</p> <p>19 mortgages," correct?</p> <p>20 A. Yes.</p> <p>21 Q. And then you have a footnote, and the</p> <p>22 footnote cites a Federal Reserve bulletin from 1996,</p> | <p style="text-align: right;">Page 56</p> <p>1 such as FICO scores and LTV ratio and other</p> <p>2 factors listed in my report are well understood</p> <p>3 to be key characteristics that can be used to</p> <p>4 evaluate credit risk of a mortgage loan.</p> <p>5 BY MR. MARKOVITS:</p> <p>6 Q. Is it your testimony that the</p> <p>7 characteristics you cite at paragraph 61 and 62 of</p> <p>8 your report are sufficient to assess the credit risk</p> <p>9 for subprime and nontraditional loans purchased by</p> <p>10 Freddie Mac during the relevant period?</p> <p>11 MR. BLOCK: Objection to form.</p> <p>12 THE WITNESS: Not necessarily. And</p> <p>13 Freddie Mac's disclosures did cover additional</p> <p>14 subjects.</p> <p>15 What I don't want to create an</p> <p>16 impression is that paragraph 62 and 62 -- 63</p> <p>17 refer to the entire list of credit risk</p> <p>18 characteristics that Freddie Mac disclosed.</p> <p>19 As you can see on page 32 and 33 of my</p> <p>20 report, which are also paragraph 65, there were</p> <p>21 various other credit risk characteristics that</p> <p>22 Freddie Mac presumably thought would help</p> |

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| <p style="text-align: right;">Page 57</p> <p>1 investors more fully assess credit risk in its</p> <p>2 portfolio in that current environment.</p> <p>3 Obviously, to the extent 2006 and 2007 vintages</p> <p>4 and declining home price environment were</p> <p>5 proving to have greater credit risk than earlier</p> <p>6 vintages, you wouldn't expect to find that in</p> <p>7 the Federal Reserve bulletin that we referenced</p> <p>8 earlier.</p> <p>9 Freddie Mac did make extensive</p> <p>10 disclosures of various credit characteristics,</p> <p>11 is a fair characterization of that section in my</p> <p>12 report.</p> <p>13 BY MR. MARKOVITS:</p> <p>14 Q. All right. And if you -- let's talk</p> <p>15 about those charts on pages 32, 33, 34, 35 of your</p> <p>16 report, and let me ask the same questions.</p> <p>17 Is it your opinion that the information</p> <p>18 in those charts were sufficient -- would be</p> <p>19 sufficient for someone to assess the credit risk from</p> <p>20 Freddie Mac's subprime and nontraditional loans in</p> <p>21 the time period covered by those charts?</p> <p>22 MR. BLOCK: Objection to form.</p> | <p style="text-align: right;">Page 59</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. We're getting, again, a little far</p> <p>3 afield from my question.</p> <p>4 Is it your opinion that the credit risk</p> <p>5 from subprime and nontraditional loans during the</p> <p>6 relevant period would be assessed by an investor</p> <p>7 using the information that you set forth here in your</p> <p>8 report?</p> <p>9 MR. BLOCK: Objection to form.</p> <p>10 THE WITNESS: So if subprime loans are</p> <p>11 defined by somebody as loans with FICO less than</p> <p>12 620, those disclosures do give significant</p> <p>13 information on credit risk of those loans.</p> <p>14 If by "nontraditional loans," you mean</p> <p>15 Alt-A loans, option-arm loans, loans with LTV</p> <p>16 greater than 90 percent, or loans with LTV less</p> <p>17 than 620 and LTV greater than 90 percent, those</p> <p>18 are also covered by these disclosures.</p> <p>19 So I don't know what you are referring</p> <p>20 to in addition to this, when you seem to be</p> <p>21 implying in your question that somehow these</p> <p>22 disclosures were insufficient for some part of</p> |
| <p style="text-align: right;">Page 58</p> <p>1 THE WITNESS: As you can see from titles</p> <p>2 of those charts, Counsel, they pertain to</p> <p>3 disclosures about Freddie Mac's aggregate</p> <p>4 portfolio, not a particular subset of the</p> <p>5 portfolio, unless that particular subset is</p> <p>6 singled out.</p> <p>7 For example, there are disclosures about</p> <p>8 Alt-A loans, and option-arm loans, and loans</p> <p>9 with FICO less than 620, and loans with original</p> <p>10 LTV greater than 90 percent. There are</p> <p>11 disclosures by vintages. There are disclosures</p> <p>12 by owner-occupied and second lien, and loans</p> <p>13 with credit enhancement. These were disclosures</p> <p>14 that pertain to the entirety of Freddie Mac's</p> <p>15 portfolio.</p> <p>16 And from an investor's point of view, an</p> <p>17 investor such as OPERS, when they invest in</p> <p>18 Freddie Mac stock, they're not buying a claim on</p> <p>19 a subset of Freddie Mac's mortgage portfolio.</p> <p>20 They're buying a claim on the entirety of their</p> <p>21 portfolio.</p> <p>22</p> | <p style="text-align: right;">Page 60</p> <p>1 Freddie Mac's portfolio.</p> <p>2 BY MR. MARKOVITS:</p> <p>3 Q. I'm not implying anything.</p> <p>4 I'm asking you: Is it your opinion that</p> <p>5 this information is sufficient to assess the credit</p> <p>6 risk from Freddie Mac subprime and nontraditional</p> <p>7 loans during the relevant period?</p> <p>8 MR. BLOCK: Objection to form.</p> <p>9 THE WITNESS: Well, I don't know how you</p> <p>10 define the word "sufficient" in your question.</p> <p>11 I think for an investor in Freddie Mac stock,</p> <p>12 these disclosures were sufficient in the sense</p> <p>13 that they provided considerable information that</p> <p>14 these disclosures were, if anything, more</p> <p>15 detailed than disclosures that were being</p> <p>16 provided by other similar companies during the</p> <p>17 relevant period. So in that sense, they were</p> <p>18 sufficient.</p> <p>19 If by "sufficient," you're asking me,</p> <p>20 hey, there was a particular loan out of 8 or</p> <p>21 10 million in Freddie Mac's portfolio, and did</p> <p>22 Freddie Mac disclose on that loan there was a</p> |

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| <p style="text-align: right;">Page 61</p> <p>1 certain fact that might affect its credit risk, 2 of course these disclosures are not designed to 3 be sufficient in that sense of the word. 4 BY MR. MARKOVITS: 5 Q. Would these disclosures be sufficient 6 for an investor to estimate the losses that would 7 occur from credit risk based on these disclosures? 8 A. These and other disclosures Freddie Mac 9 made of delinquency rates, of expected losses, and 10 various other source of information Freddie Mac made 11 available to investing public, it's my opinion as a 12 financial economist, that from that point of view, 13 often investor in Freddie Mac stock, these 14 disclosures were, at the time, sufficient. 15 Q. Did you attempt to model the credit risk 16 of Freddie Mac during the relevant period, based on 17 the information that was publicly disclosed at the 18 time? 19 A. Can you clarify what you mean by 20 "model"? 21 Q. Yes. I think one of your critiques of 22 Mr. Shapiro was that he had a model, but he didn't</p> | <p style="text-align: right;">Page 63</p> <p>1 of Freddie Mac's portfolio's credit risk. 2 Q. So if you're giving the opinion, or 3 intend to give us the opinion, that the disclosures 4 were sufficient for a reasonable investor to 5 determine that credit risk, that's something that, as 6 an economist, you can prove through modeling, 7 couldn't you? 8 A. Again, Counsel, it's not my job to prove 9 -- 10 Q. I'm sorry. Can you answer the question? 11 Isn't that something an economist could prove through 12 a model? 13 MR. BLOCK: Objection to form. 14 THE WITNESS: Not necessarily. Models 15 are models. My job was to evaluate whether 16 there is any evidence of disclosure defects 17 alleged in the complaint. And for that purpose, 18 I didn't need to do any econometric model when 19 Freddie Mac itself ran those econometric models 20 and provided results of those econometric models 21 to the investing public on a monthly basis. 22 And I have not seen any allegation in</p> |
| <p style="text-align: right;">Page 62</p> <p>1 employ it with regard to his analysis of the risk 2 during the relevant period leading up to November 20, 3 2007, or in his analysis in that period. 4 The question I have for you is: Did you 5 do any type of econometric modeling, taking this 6 information during the relevant period, prove the 7 point that it would be sufficient to estimate the 8 credit risk that Freddie Mac faced during that 9 period? 10 MR. BLOCK: Objection to form. 11 Go ahead. 12 THE WITNESS: I wasn't retained to do 13 what Mr. Shapiro was asked to do. And my 14 comment on his work, and, as I saw, the lack of 15 -- 16 BY MR. MARKOVITS: 17 Q. Doctor, can you just answer my question 18 first, and then you can go into some of -- whatever 19 speech you want to give. 20 My question is: Did you provide a 21 model? 22 A. I did not provide an econometric model</p> | <p style="text-align: right;">Page 64</p> <p>1 the complaint that these models were cooked or 2 the results were false, so I didn't need to do 3 any models. 4 BY MR. MARKOVITS: 5 Q. Have you done any investigation as to 6 whether the modeling was sufficient? Haven't you 7 seen allegations in this case relating to the fact 8 that Freddie Mac's regulators were criticizing 9 Freddie Mac for its inability to model the risk from 10 the new or nontraditional loans? 11 MR. BLOCK: Objection to form. 12 MR. MARKOVITS: Let me just redo the 13 question. 14 BY MR. MARKOVITS: 15 Q. Have you seen any evidence that OFHEO or 16 FHFA -- 17 (Court reporter clarification.) 18 Q. Are you aware of any evidence that OFHEO 19 or FHFA, during or after the relevant period, 20 criticized Freddie Mac for its inability to 21 accurately model the credit risk associated with 22 nontraditional loans?</p> |

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| <p style="text-align: right;">Page 65</p> <p>1 A. If you're going to ask me questions 2 about said criticisms, I would appreciate having a 3 document that I can refer to. 4 Q. Okay. I'm not asking about any 5 particular documents. I'm asking: In your review of 6 the evidence, did you come across anything that 7 suggested that OFHEO or FHFA criticized Freddie Mac 8 for the fact that its models couldn't accurately 9 gauge the credit risk associated with the newer or 10 nontraditional loans? 11 A. I don't know that any document used 12 those words that are in your question. I am aware of 13 regulators, as well as internal risk management 14 people, doing what they're supposed to do in risk 15 management, pointing out that newer products, that, 16 by definition, didn't have sufficient historical 17 record, when fed into credit risk models, would 18 result in conclusions which would have lower 19 precision than your, say, 30-year fixed rate 20 conforming mortgage, about which there was a lot more 21 data to perform statistical analysis. 22 That does not imply, at least as I read</p> | <p style="text-align: right;">Page 67</p> <p>1 MR. BLOCK: Objection to form. 2 THE WITNESS: Can you repeat your 3 question, please? 4 BY MR. MARKOVITS: 5 Q. If I were to ask you to assume the data 6 in the charts was inaccurate in some material 7 respect, would I be correct that that would affect 8 your opinion on whether one could gauge Freddie Mac's 9 exposure to credit risk based on this data? 10 MR. BLOCK: Same objection. 11 THE WITNESS: Aren't you asking me to 12 assume your position as being true, and then 13 asking me to say if I agree with your position? 14 I think your hypothetical assumes the ultimate 15 answer, so I don't know how to answer. 16 BY MR. MARKOVITS: 17 Q. It's almost in totality. If the data is 18 inaccurate, then you can't assess -- if the data is 19 inaccurate in a material respect, then you can't 20 accurately assess the credit risk, correct? 21 MR. BLOCK: Objection to form. 22 THE WITNESS: The only thing I would</p> |
| <p style="text-align: right;">Page 66</p> <p>1 it, that Freddie Mac was somehow behind these loans 2 without understanding their risk, as Mr. Shapiro 3 alleges. 4 Q. Going to Table 22 on page 34 of your 5 report, did you attempt to verify any of the data on 6 that chart? 7 A. I assumed that the data published in the 8 financial reports was accurate, so I did not do any 9 forensic analysis of recomputing any of that data. 10 I'd like to add to the answer I just 11 gave. 12 When I said that I assume the data was 13 accurate, I don't mean it in the sense of ultimate 14 truth or falsity. What I mean is that data was 15 disclosed and was available to investing public, and 16 I have not seen any evidence or even an allegation 17 backed up by any analysis that that data was not 18 accurate. 19 Q. If I were to ask you to assume that the 20 data in the charts was inaccurate in any material 21 respect, you'd agree that it would affect the ability 22 to assess credit risk, correct?</p> | <p style="text-align: right;">Page 68</p> <p>1 differ with is it's not almost a totality. It 2 is a totality. And I don't know how an expert 3 is supposed to comment on a totality. 4 BY MR. MARKOVITS: 5 Q. Well, "yes" or "no" would be preferable. 6 You reviewed a number of secured analyst 7 reports regarding Freddie Mac leading up to 8 November 20th, 2007, correct? 9 A. Yes. 10 Q. Did any those reports assess the credit 11 risk to Freddie Mac being as large as was disclosed 12 on November 20th, 2007? 13 A. Are you asking me, did any of the 14 writers of those reports predicted the future? Of 15 course nobody did, except Mr. Shapiro, who did, I 16 might add, pretty accurately predict from public 17 information the losses that Freddie Mac announced on 18 November 20th and predicted that as a result of those 19 losses, it would have zero capital above the OFHEO's 20 30 percent surplus requirement by the end of that 21 quarter. 22 So some did predict. But, of course, as</p> |

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| <p style="text-align: right;">Page 69</p> <p>1 the credit prices worsened, market analysts and</p> <p>2 companies were repeatedly surprised by how severe</p> <p>3 that crisis was turning out to be.</p> <p>4 Q. Now, when you say that Mr. Shapiro</p> <p>5 predicted it, what was his prediction on earnings per</p> <p>6 share on a GAAP analysis?</p> <p>7 A. I don't remember the earnings per share</p> <p>8 number. But what I do remember, he's predicted a</p> <p>9 \$1.6 billion dollar loss which was pretty close to</p> <p>10 \$2 billion dollars that was ultimately announced.</p> <p>11 And he also had a caveat that, given extreme</p> <p>12 uncertainty, it's hard to make accurate loss</p> <p>13 predictions.</p> <p>14 Does that answer your question?</p> <p>15 Q. For the time -- for the time being, yes.</p> <p>16 Would you consider a 20 percent</p> <p>17 difference to be pretty close from an economic</p> <p>18 statistical significance aspect?</p> <p>19 A. In that environment, yes. When you look</p> <p>20 at the chart in my report about the dispersion</p> <p>21 analysis earnings forecast getting wider and wider</p> <p>22 getting into the third quarter of 2007, and various</p> | <p style="text-align: right;">Page 71</p> <p>1 Q. It discusses LTV ratios, correct?</p> <p>2 A. Give me a moment, please.</p> <p>3 Yes, it does discuss an LTV ratio.</p> <p>4 Q. What is an LTV ratio?</p> <p>5 A. LTV stands for loan-to-value. That's</p> <p>6 the loan's unpaid principal balance in a loan Freddie</p> <p>7 Mac invested in and had some risk due, relative to</p> <p>8 value of the underlying property.</p> <p>9 Q. Do you know how Freddie Mac determined</p> <p>10 the LTV ratio?</p> <p>11 A. I think I understand what that term</p> <p>12 means and, therefore, how Freddie Mac determined it.</p> <p>13 Q. Apart from the general understanding of</p> <p>14 what the term means, do you know how Freddie Mac</p> <p>15 actually went about determining it during the</p> <p>16 relevant period?</p> <p>17 A. I'm sorry. Could you more specific?</p> <p>18 I don't know what to say beyond my general</p> <p>19 understanding.</p> <p>20 Q. I'm looking -- I'm sorry, Doctor.</p> <p>21 Perhaps I'm not clear.</p> <p>22 I'm looking to whether you know the</p> |
| <p style="text-align: right;">Page 70</p> <p>1 disclosures by Freddie Mac as to how credit risk and</p> <p>2 developing liquidity crisis was making it harder and</p> <p>3 harder to predict credit losses, I think under those</p> <p>4 circumstances, it was pretty close, yes.</p> <p>5 Q. We'll get to that chart.</p> <p>6 But briefly on that chart, none of the</p> <p>7 analysts that you cite in that chart predicted a loss</p> <p>8 as great as it occurred, correct?</p> <p>9 A. I'd have to review the chart.</p> <p>10 Q. I think I can tell you from memory, the</p> <p>11 lowest was a Morgan Stanley at \$3.01, and the</p> <p>12 earnings per share loss was \$3.29, if that refreshes</p> <p>13 your recollection?</p> <p>14 A. It doesn't, but if you're making that</p> <p>15 representation, I'll take your representation.</p> <p>16 Q. All right. Let's just move on then.</p> <p>17 Let's go back to Table 22 of your report</p> <p>18 on page 34. Let's talk about LTV ratio for a second.</p> <p>19 What is an LTV ratio?</p> <p>20 A. Which table are you referring to?</p> <p>21 Q. Table 22 on page 34.</p> <p>22 A. Okay.</p> | <p style="text-align: right;">Page 72</p> <p>1 methodology that Freddie Mac employed in its</p> <p>2 determination of the LTV ratios that are displayed on</p> <p>3 Table 22?</p> <p>4 A. Yes. As I described it, it is the</p> <p>5 loan's unpaid principal balance in the first lien</p> <p>6 that Freddie Mac invested in, divided by value of the</p> <p>7 underlying property. That's what LTV ratio is.</p> <p>8 Q. Right. And did they use a specific</p> <p>9 model to determine that LTV ratio, to your knowledge?</p> <p>10 A. I don't know what you mean by "a</p> <p>11 specific model." It's a calculation. I don't know</p> <p>12 whether they used Excel or something else.</p> <p>13 Q. Do you know whether their method of</p> <p>14 determining LTV ratios changed during the relevant</p> <p>15 period?</p> <p>16 A. Not to my knowledge and recollection.</p> <p>17 Q. And you mentioned the LTV ratio depends,</p> <p>18 in part, upon the value of the house, correct?</p> <p>19 A. Well, there are two things. One is the</p> <p>20 numerator, the other is a denominator, and the value</p> <p>21 of the house is a denominator.</p> <p>22 Q. So the answer would be "yes"?</p> |

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| <p style="text-align: right;">Page 73</p> <p>1 A. Yes.</p> <p>2 Q. And the value of the house is generally</p> <p>3 determined by an appraisal?</p> <p>4 A. Yes.</p> <p>5 Q. During the relevant period, was</p> <p>6 appraisal fraud increasing?</p> <p>7 MR. BLOCK: Objection to form.</p> <p>8 THE WITNESS: I don't know for a fact</p> <p>9 about Freddie Mac's portfolio. I understand</p> <p>10 from my readings that in the subprime sector of</p> <p>11 the market for certain originators, it was</p> <p>12 understood that their appraisal-related</p> <p>13 guidelines were not requiring appraisals to be</p> <p>14 conforming to uniform standards of professional</p> <p>15 appraisal practices, or USPAP as it's called.</p> <p>16 (Reporter clarification.)</p> <p>17 THE WITNESS: USPAP, U-S-P-A-P.</p> <p>18 BY MR. MARKOVITS:</p> <p>19 Q. Do you know whether the appraisal</p> <p>20 practices of Freddie Mac changed after the relevant</p> <p>21 period?</p> <p>22 A. No.</p> | <p style="text-align: right;">Page 75</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. And apart from quality control, do you</p> <p>3 know whether LP was intended to be an automated fraud</p> <p>4 detection system?</p> <p>5 A. It's my understanding that it was a</p> <p>6 software tool, and to the extent that software tool</p> <p>7 could be used to detect fraud, in that sense, it</p> <p>8 would be. But a software system is not designed to</p> <p>9 go and interview an appraiser.</p> <p>10 And as I said before, Freddie Mac's</p> <p>11 business model was to require loan originators that</p> <p>12 sold loans to Freddie Mac, to provide certain</p> <p>13 representations and warranties that covered any fraud</p> <p>14 if it were detected, either through use of LP system</p> <p>15 or however else it subsequently came to light.</p> <p>16 Q. Do you understand, Doctor, that there</p> <p>17 are, in the mortgage industry, software systems that</p> <p>18 are considered fraud detection systems?</p> <p>19 A. My understanding is there are a lot of</p> <p>20 vendors coming up with a lot of systems that are</p> <p>21 helpful and promise to do a lot of things. I don't</p> <p>22 know what you are referring to.</p> |
| <p style="text-align: right;">Page 74</p> <p>1 Q. Do you know whether Freddie Mac had any</p> <p>2 automated system during the relevant period for</p> <p>3 detecting fraud?</p> <p>4 A. Well, if you're referring to the LP</p> <p>5 model, which was Freddie Mac's automated underwriting</p> <p>6 software, or AUS as it's called, it's my</p> <p>7 understanding that Freddie Mac uniformly used the LP</p> <p>8 model for its post-purchase quality control, even if</p> <p>9 a loan they purchased was originally underwritten</p> <p>10 using another AUS, such as Fannie Mae's AUS.</p> <p>11 Q. Was it your understanding that LP as an</p> <p>12 AUS was being used to detect fraud within Freddie</p> <p>13 Mac's portfolio?</p> <p>14 MR. BLOCK: Objection to form.</p> <p>15 THE WITNESS: What I was referring to</p> <p>16 was Freddie Mac's 2005 and 2006 annual reports,</p> <p>17 where I believe I appropriately summarized what</p> <p>18 is stated in those reports. Namely, that to the</p> <p>19 extent fraud detection took place through</p> <p>20 post-purchase quality control processes, Freddie</p> <p>21 Mac used its LP software to conduct such</p> <p>22 post-purchase quality controls.</p> | <p style="text-align: right;">Page 76</p> <p>1 Q. So you don't know whether during the</p> <p>2 relevant period, there were any automated fraud</p> <p>3 detection systems that would have been available to</p> <p>4 Freddie Mac to use?</p> <p>5 MR. BLOCK: Objection to form.</p> <p>6 THE WITNESS: I don't know any specifics</p> <p>7 about any such systems that you are referring to</p> <p>8 or whether Freddie Mac used them or did not use</p> <p>9 them. I can't speak to what was available to</p> <p>10 Freddie Mac or not.</p> <p>11 Is this a good time for us to take five</p> <p>12 minutes? Unless you're in the middle of a</p> <p>13 question.</p> <p>14 MR. MARKOVITS: That's fine, Doctor.</p> <p>15 Five minutes.</p> <p>16 (Brief recess.)</p> <p>17 MR. MARKOVITS: Back on the record.</p> <p>18 BY MR. MARKOVITS:</p> <p>19 Q. Dr. Bajaj, when we left, we were talking</p> <p>20 about a little bit about fraud and the LTV ratios. I</p> <p>21 want to try to tie the two together.</p> <p>22 Would you agree that fraudulent</p> |

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| <p style="text-align: right;">Page 77</p> <p>1 appraisals generally inflate the value of a house?</p> <p>2 (Reporter Clarification.)</p> <p>3 THE WITNESS: Well, I presume in your</p> <p>4 question, if the value of the house is deflated,</p> <p>5 from a lender's perspective, that won't be</p> <p>6 considered fraud. That would be considered</p> <p>7 conservative. So in that sense, yes.</p> <p>8 BY MR. MARKOVITZ:</p> <p>9 Q. And an inflated house value would</p> <p>10 decrease the LTV ratio? Another one of those tough</p> <p>11 logical questions.</p> <p>12 A. I agree that if the denominator in the</p> <p>13 LTV ratio is overstated, that would have the effect</p> <p>14 of understating the computation of the ratio.</p> <p>15 Q. Doctor, I gave you the extra five</p> <p>16 minutes. Can I get a "yes" or "no"?</p> <p>17 So you would agree fraudulent appraisals</p> <p>18 would affect the accuracies of the LTV ratios on</p> <p>19 Table 22?</p> <p>20 MR. BLOCK: Objection to form.</p> <p>21 THE WITNESS: Are you asking me to</p> <p>22 assume that there were fraudulent appraisals, or</p> | <p style="text-align: right;">Page 79</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. Do you have any information regarding</p> <p>3 the percentage of Freddie Mac loans during the</p> <p>4 relevant period that were affected by fraud?</p> <p>5 A. No.</p> <p>6 Q. You did no investigation about the</p> <p>7 extent to which fraud affected Freddie Mac's</p> <p>8 single-family guarantee portfolio?</p> <p>9 A. Are you asking me whether fraud in</p> <p>10 appraisals affected stated LTV ratios in Table 22, or</p> <p>11 are you asking me a more general question?</p> <p>12 Q. More generally.</p> <p>13 A. Can you repeat your question, please?</p> <p>14 Q. Did you investigate at all the extent to</p> <p>15 which fraud affected Freddie Mac's single-family</p> <p>16 portfolio during the relevant period?</p> <p>17 A. If by "investigate," you mean did I do</p> <p>18 the forensic accounting exercise of double-checking</p> <p>19 these numbers, the answer is no. But I did, of</p> <p>20 course, evaluate allegations of misstatements of some</p> <p>21 of these numbers made by plaintiff and their expert,</p> <p>22 Mr. Shapiro.</p> |
| <p style="text-align: right;">Page 78</p> <p>1 are you asking me if there were fraudulent</p> <p>2 appraisals that overstated value, that could</p> <p>3 inflate the LTV ratio stated in Table 22?</p> <p>4 BY MR. MARKOVITS:</p> <p>5 Q. If there were fraudulent appraisals that</p> <p>6 increased -- inflated the house's value, that would</p> <p>7 affect the LTV ratios on Table 22, correct?</p> <p>8 A. Yes.</p> <p>9 Q. And that would, in turn, falsely</p> <p>10 minimize the perceived credit risk, at least based on</p> <p>11 the LTV ratios, correct?</p> <p>12 MR. BLOCK: Objection to form.</p> <p>13 THE WITNESS: In that hypothetical, it</p> <p>14 could. It depends on the magnitude. It depends</p> <p>15 on the number of loans. As I said, on a</p> <p>16 \$2 trillion portfolio, take average unpaid</p> <p>17 principal balance of around \$200,000, you're</p> <p>18 talking about 10 million loans. So if there</p> <p>19 were ten loans out of 10 million loans, then it</p> <p>20 would have no economically significant impact.</p> <p>21 But if it were a million loans with fraudulent</p> <p>22 appraisals, then it could.</p> | <p style="text-align: right;">Page 80</p> <p>1 Q. I'm not asking whether you did an</p> <p>2 independent evaluation.</p> <p>3 I'm asking, for example, did you</p> <p>4 investigate Freddie Mac's internal assessments or the</p> <p>5 internal assessments of consultants with regard to</p> <p>6 the extent to which Freddie Mac's single-family</p> <p>7 portfolio was affected by fraud during the relevant</p> <p>8 period?</p> <p>9 A. I only saw the materials that are in my</p> <p>10 documents considered list, as supplemented by</p> <p>11 materials cited in Mr. Shapiro's report. I did not</p> <p>12 look for materials of the nature you're referring to</p> <p>13 outside of that universe.</p> <p>14 Q. The LTV ratios in Table 22 do not</p> <p>15 include piggyback loans, correct?</p> <p>16 A. Those are LTV ratios for first lien</p> <p>17 mortgages, and by definition, they would not include</p> <p>18 piggyback loans in those computations.</p> <p>19 Q. The percentage of piggyback loans within</p> <p>20 Freddie Mac's single-family mortgage portfolio was</p> <p>21 not disclosed until the end of the relative period,</p> <p>22 November 20th, 2007, correct?</p> |

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| <p style="text-align: right;">Page 81</p> <p>1 A. I know it was disclosed on 2 November 20th, 2007, and I seem to recall some 3 discussion of secondary financing in an earlier 4 period, but I can't put my finger on that as I sit 5 here right now. 6 Q. In any case, on November 20th, 2007, 7 Freddie Mac disclosed that including piggyback loans, 8 a number of loans with an LTV over 90 percent 9 increased from 5 percent to 14 percent? Is that your 10 recollection? 11 A. It would be better if I saw what you're 12 referring to, or I can simply say that's not 13 inconsistent with my recollection. 14 Q. Let's just go with not inconsistent. 15 A. Okay. 16 Q. You would agree that an 80 percent LTV 17 ratio with a 20 percent piggyback is a higher risk 18 than an 80 percent LTV ratio without the piggyback, 19 correct? 20 MR. BLOCK: Objection to form. 21 BY MR. MARKOVITS: 22 Q. Are you taking some time to look in your</p> | <p style="text-align: right;">Page 83</p> <p>1 than a loan without a piggyback, correct? 2 A. Well, when you say "generally speaking," 3 I don't know whether Freddie Mac's exposure to loans 4 with piggyback loans had lower than average or higher 5 than average FICO scores or other compensating 6 factors that could make the statement that you had in 7 your question incorrect. But all else being equal, I 8 can agree to what you said. 9 Q. And are you aware of any studies which 10 would indicate, again, generally speaking, the extent 11 to which delinquency rates of the piggyback loans 12 exceed the delinquency rates of the piggyback loans? 13 A. Are you referring to the delinquency 14 rates of piggyback loans, meaning the second trustee 15 loans? Or are you saying delinquency rates on first 16 trustee loans that also have a piggyback loan? What 17 are you asking me? 18 Q. The delinquency of a first trustee's 19 loan that also have a piggyback loan? 20 A. Yes, I'm aware of studies that examine 21 that issue, in particular for the agency mortgage 22 portfolio. For example, in the FCIC report.</p> |
| <p style="text-align: right;">Page 82</p> <p>1 report and find where you address it? 2 A. Yes. There are several paragraphs 3 addressing that topic, and I'm trying to find those 4 paragraphs. 5 I think I've located it. I think I 6 address those issues in paragraphs 125 through 127. 7 And if you repeat your question, I can answer it. 8 Q. You'd agree that an 80 percent LTV ratio 9 with a 20 percent piggyback is a higher risk than an 10 80 percent LTV ratio without a piggyback, all else 11 being equal? 12 A. Yeah, the key provision there being all 13 else being equal, because if the borrower had a FICO 14 score of 800 in the piggyback loans situation and had 15 a \$5 million securities portfolio, that would be a 16 different picture then. So, all else being equal, a 17 loan with certain LTV ratio without a piggyback loan 18 could have a higher credit risk than a loan with a 19 piggyback loan and the same LTV ratio as I state in 20 those paragraphs. 21 Q. But generally speaking, all else being 22 equal, a loan with a piggyback is a higher risk loan</p> | <p style="text-align: right;">Page 84</p> <p>1 Q. And do you -- can you tell me, generally 2 speaking, what multiplier of delinquency rates are 3 there for loans with piggybacks versus loans without 4 piggybacks? 5 A. Not as I sit here right now from memory. 6 Q. You referred to paragraphs 125 to, I 7 think, 127 of your report. Am I correct that you 8 suggest in those paragraphs that because it was known 9 that many loans included piggybacks during the 10 relevant period, the market would have assumed that 11 was the case with Freddie Mac? 12 A. That is true. And I also discuss, 13 either in those paragraphs or elsewhere, that when 14 Freddie Mac did make the disclosure for Q3 2007 that 15 you referred to, the market did not seem to be 16 surprised, and there were no questions on Freddie Mac 17 having considerably less proportional piggyback loans 18 in its portfolio than was generally the case in the 19 industry. 20 Q. Why would the market assume that 21 Freddie Mac avoided piggyback loans? 22 A. Can you repeat your question, please?</p> |

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| <p style="text-align: right;">Page 85</p> <p>1 Q. Why would the market during the relevant</p> <p>2 period have assumed that Freddie Mac avoided</p> <p>3 piggyback loans?</p> <p>4 A. I think the market is smarter than that.</p> <p>5 We are talking about a company that lent to a</p> <p>6 significant fraction of households in the country, a</p> <p>7 company that, based on my back-of-the-envelope</p> <p>8 calculations, was exposed to about 10 million loans,</p> <p>9 and along with Fannie Mae, their market share by the</p> <p>10 end of 2007 was, if I recall correctly, about</p> <p>11 70 percent of the market.</p> <p>12 So why would it be rational for the</p> <p>13 market to assume that practices that were common in</p> <p>14 the industry would somehow not touch Freddie Mac or</p> <p>15 Fannie Mae? That's the question.</p> <p>16 Q. Were subprime loans common in the</p> <p>17 industry during that period of time?</p> <p>18 A. Yes.</p> <p>19 Q. And Freddie Mac claimed it wasn't</p> <p>20 investing in subprime, correct?</p> <p>21 A. Well, I believe Freddie Mac's</p> <p>22 disclosures were a lot more precise than that.</p> | <p style="text-align: right;">Page 87</p> <p>1 answer "yes" or "no." Then if you need to explain,</p> <p>2 you can go ahead and explain. All right.</p> <p>3 So you'd agree with me -- we agreed that</p> <p>4 piggyback loans, all else being equal, are higher</p> <p>5 credit risks than nonpiggyback loans, correct?</p> <p>6 A. Correct, all else being equal.</p> <p>7 Q. Yes. And we can agree that prior to</p> <p>8 November 20th, 2007, there was no disclosure by</p> <p>9 Freddie Mac of the percentage of piggyback loans</p> <p>10 within its single-family portfolio, correct?</p> <p>11 A. Yes, with the caveat I expressed before,</p> <p>12 that I seem to recall some discussion of increased</p> <p>13 use of secondary financing. But as I sit here right</p> <p>14 now, I can't lay my finger on what or where.</p> <p>15 Q. Can you tell from Table 22 -- going back</p> <p>16 to Table 22, which is on page 34 of your report.</p> <p>17 Can you tell from Table 22 whether the</p> <p>18 loans reflected on that chart followed Freddie Mac's</p> <p>19 underwriting guidelines?</p> <p>20 A. No.</p> <p>21 Q. Do you know what Freddie Mac means when</p> <p>22 it identifies loans with material exceptions?</p> |
| <p style="text-align: right;">Page 86</p> <p>1 Freddie Mac did say that it owned, if I recall</p> <p>2 correctly, about \$120 billion of private-label</p> <p>3 securitizations in its retained portfolio that were</p> <p>4 backed by subprime loans, but those were AAA where</p> <p>5 they had laid off the credit risk.</p> <p>6 Freddie Mac did disclose that it had</p> <p>7 small proportions of loans backed by -- or a small</p> <p>8 proportion of the investment in its guaranteed</p> <p>9 portfolio, the so-called T deals, that were backed by</p> <p>10 subprime loans. I think those were less than</p> <p>11 0.1 percent of Freddie Mac's portfolio or something</p> <p>12 like that.</p> <p>13 Freddie Mac did disclose that a</p> <p>14 significant fraction of its loans had been made to</p> <p>15 borrowers with FICO less than 620, which oftentimes</p> <p>16 was --</p> <p>17 Q. We're getting very, very far afield from</p> <p>18 my question, which was a "yes" or "no" question</p> <p>19 again. Let's just move on if we can.</p> <p>20 A. Okay.</p> <p>21 Q. And I ask, please, if you could -- if I</p> <p>22 ask a "yes" or "no" question, could you possibly</p> | <p style="text-align: right;">Page 88</p> <p>1 MR. BLOCK: Objection to form.</p> <p>2 THE WITNESS: I have an understanding of</p> <p>3 what exceptions means. The way you asked the</p> <p>4 question, you talk about material exceptions,</p> <p>5 and I don't know what you mean by "material" as</p> <p>6 a qualifier in the question.</p> <p>7 BY MR. MARKOVITS:</p> <p>8 Q. You've never seen that phrase, "material</p> <p>9 exception," used in the Freddie Mac documents?</p> <p>10 A. Not that I recall right now.</p> <p>11 Q. Well, let's just assume the loans with</p> <p>12 material exceptions are loans that did not comply</p> <p>13 with Freddie Mac's underwriting standards, all right?</p> <p>14 A. Okay.</p> <p>15 Q. Using that definition, there's no</p> <p>16 particular credit score associated with material</p> <p>17 exceptions, correct?</p> <p>18 A. No. There's a credit score associated</p> <p>19 with every loan. If you mean by "credit score," FICO</p> <p>20 score of the borrower, I don't know what you're</p> <p>21 getting to.</p> <p>22 Q. What I'm getting to is, you can't look</p> |

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| <p style="text-align: right;">Page 89</p> <p>1 at the somebody's FICO score -- or look at the FICO</p> <p>2 score on these charts and say, "Oh, that category is</p> <p>3 a material exception"?</p> <p>4 MR. BLOCK: Objection to form.</p> <p>5 THE WITNESS: Not from this chart, no.</p> <p>6 BY MR. MARKOVITS:</p> <p>7 Q. There's no particular LTV ratio</p> <p>8 associated with the material exception, correct?</p> <p>9 MR. BLOCK: Objection to form.</p> <p>10 THE WITNESS: No. As I said before,</p> <p>11 there is LTV associated with each loan, so I</p> <p>12 don't understand your question.</p> <p>13 BY MR. MARKOVITS:</p> <p>14 Q. My question is: You can't look at an</p> <p>15 LTV ratio -- there could be an LTV ratio of whatever,</p> <p>16 75 percent for a particular loan with a material</p> <p>17 exception and 75 percent for a loan without a</p> <p>18 material exception, correct?</p> <p>19 A. Okay.</p> <p>20 Q. Is that your understanding?</p> <p>21 A. Yes. But a loan with material exception</p> <p>22 would be a loan with less credit risk than a loan</p> | <p style="text-align: right;">Page 91</p> <p>1 those with purported material exceptions -- it's my</p> <p>2 understanding that part of what is represented in</p> <p>3 Table 22, there weren't loans in some drawer</p> <p>4 somewhere that were hidden and on which credit risk</p> <p>5 characteristics were not reported as part of overall</p> <p>6 credit risks characteristics of the entire portfolio</p> <p>7 or the subset of portfolio that Freddie Mac</p> <p>8 disclosed.</p> <p>9 Q. That wasn't my question, but all right.</p> <p>10 Freddie Mac did not disclose during the</p> <p>11 relevant period the number or percentage of loans in</p> <p>12 its single-family portfolio with material exceptions,</p> <p>13 correct?</p> <p>14 A. I don't have Freddie Mac's financial</p> <p>15 disclosures memorized. So if you want to represent</p> <p>16 that fact, I can accept your representation, but I</p> <p>17 don't remember from memory one way or another.</p> <p>18 Q. I think you mentioned earlier that some</p> <p>19 of the loans in a single-family portfolio were</p> <p>20 underwritten using other company's AUSs or</p> <p>21 underwriting guidelines, correct?</p> <p>22 A. Yes.</p> |
| <p style="text-align: right;">Page 90</p> <p>1 without a purported material exception.</p> <p>2 Q. That wasn't my question, though. I</p> <p>3 mean, you can have the same LTV ratio for two</p> <p>4 different loans, one that is a material exception and</p> <p>5 one that is not, correct?</p> <p>6 MR. BLOCK: Objection to form.</p> <p>7 THE WITNESS: Is that one of your</p> <p>8 tautological questions? You're asking me to</p> <p>9 assume that could happen. Yes, that could</p> <p>10 happen.</p> <p>11 BY MR. MARKOVITS:</p> <p>12 Q. Do you have an understanding whether</p> <p>13 delinquency rates on loans with material exceptions</p> <p>14 are higher on average than those without material</p> <p>15 exceptions?</p> <p>16 A. I don't recall such statistics as I sit</p> <p>17 here right now.</p> <p>18 Q. So you can't say whether mortgage loans</p> <p>19 with material exceptions had generally higher credit</p> <p>20 risks than those without?</p> <p>21 A. Not in a quantitative sense, but I do</p> <p>22 understand that all of Freddie Mac's loans, including</p> | <p style="text-align: right;">Page 92</p> <p>1 Q. Can you talk in Table 22 how many of the</p> <p>2 loans reflected in that table were underwritten using</p> <p>3 some other company's guidelines?</p> <p>4 A. No.</p> <p>5 Q. Do you know whether loans underwritten</p> <p>6 during the relevant period using some other company's</p> <p>7 guidelines were generally higher credit risk?</p> <p>8 A. I didn't see any evidence that there</p> <p>9 were higher credit risk.</p> <p>10 Q. Did you perform any analysis as to the</p> <p>11 strength of Freddie Mac's underwriting standards as</p> <p>12 they were applied during the relevant period?</p> <p>13 A. Can you clarify what you mean by</p> <p>14 analysis on strength of Freddie Mac's underwriting</p> <p>15 procedures, or whatever was the question?</p> <p>16 Q. Let's put it this way: To your</p> <p>17 knowledge, could investors during the relevant time</p> <p>18 period determine the extent to which Freddie Mac was</p> <p>19 adhering to its underwriting standards?</p> <p>20 A. Yes. I think a fair answer to that</p> <p>21 question would be yes, based on disclosures I saw in</p> <p>22 2005 and 2006 annual statements, and the knowledge</p> |

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| <p style="text-align: right;">Page 93</p> <p>1 that Freddie Mac bid on funded loans underwritten by</p> <p>2 third-parties, but it always used LP to do</p> <p>3 post-purchase quality control. The implication being</p> <p>4 that those loans were consistent with Freddie Mac's</p> <p>5 underwriting guidelines. And Freddie Mac even</p> <p>6 discusses, if I recall correctly, in 2006, that</p> <p>7 sometimes when it came to certain borrowers, there</p> <p>8 were specific contracts with those borrowers that</p> <p>9 addressed a segment of the market where those</p> <p>10 underwriting guidelines may be modified. So to that</p> <p>11 extent, I would say yes.</p> <p>12 Q. Other than a general statement by</p> <p>13 Freddie Mac that it utilized, at times, the</p> <p>14 underwriting standards of other companies, did you</p> <p>15 see any quantification during the relevant period of</p> <p>16 the extent to which that was happening?</p> <p>17 A. I believe the answer is yes, because I</p> <p>18 think either in 2005 or 2006, annual financial</p> <p>19 statements of both, they did say that over the last</p> <p>20 couple of years, they were buying loans that had been</p> <p>21 funded when they were originally underwritten using a</p> <p>22 different AUS than LP. To the extent, yes, they did</p> | <p style="text-align: right;">Page 95</p> <p>1 information that would be important to a reasonable</p> <p>2 investor?</p> <p>3 A. No. Because it depends on the nature of</p> <p>4 the deviation. It depends on the effect of the</p> <p>5 purported deviation. So no, you cannot say that.</p> <p>6 Q. So even if they were significantly</p> <p>7 deviating from their underwriting standards, in your</p> <p>8 opinion, that would not be information that's</p> <p>9 important to a reasonable investor?</p> <p>10 A. I disagree that you could make a general</p> <p>11 statement that just because they were deviating, it</p> <p>12 necessarily means that a reasonable investor would</p> <p>13 want to know more than beyond what they were</p> <p>14 disclosing. I didn't say that under no circumstances</p> <p>15 and with no hypothetical that could not be important</p> <p>16 to an investor.</p> <p>17 Q. Switching to paragraph 77 in your</p> <p>18 report, you note another credit -- or characteristic</p> <p>19 regarding credit risk, which is delinquency risk,</p> <p>20 correct?</p> <p>21 A. Yes.</p> <p>22 Q. I think later in your report, you</p> |
| <p style="text-align: right;">Page 94</p> <p>1 disclose that.</p> <p>2 Q. But that wasn't my question.</p> <p>3 My question was: Other than the</p> <p>4 disclosure of that nature, did you see any disclosure</p> <p>5 where they quantified the extent to which they were</p> <p>6 relying on other companies' underwriting systems?</p> <p>7 A. Can you repeat your question, please?</p> <p>8 Q. During the relevant period, did you see</p> <p>9 any disclosure where Freddie Mac disclosed the extent</p> <p>10 to which -- quantified the extent to which they were</p> <p>11 relying on other companies' automated underwriting</p> <p>12 systems?</p> <p>13 A. If by "extent" and "quantify," you mean</p> <p>14 a certain percentage, I don't recall seeing that</p> <p>15 disclosure.</p> <p>16 MR. MARKOVITS: Off the record.</p> <p>17 (Discussion ensued off the record.)</p> <p>18 MR. MARKOVITS: Back on the record.</p> <p>19 BY MR. MARKOVITS:</p> <p>20 Q. You would agree with me that if Freddie</p> <p>21 Mac was significantly deviating from its underwriting</p> <p>22 standards during the relevant period, that would be</p> | <p style="text-align: right;">Page 96</p> <p>1 discuss how Freddie Mac's delinquency rates were low.</p> <p>2 And I think that's in paragraph 124, if you want to</p> <p>3 take a look.</p> <p>4 A. I don't believe I said they were low.</p> <p>5 I said they were lower than a benchmark group that</p> <p>6 I discuss in paragraph 124.</p> <p>7 Q. Okay. Fair enough. What are</p> <p>8 delinquency rates?</p> <p>9 A. I'm sorry. Can you repeat?</p> <p>10 Q. What are delinquency rates?</p> <p>11 A. I believe Freddie Mac reported</p> <p>12 delinquency rates on its single-family loans as</p> <p>13 90 days or more late, and when it's multifamily,</p> <p>14 60 days or more late.</p> <p>15 Q. Okay. Let's focus on the single-family,</p> <p>16 which would be the 90-day cutoff?</p> <p>17 Is that your understanding?</p> <p>18 A. That is my understandings, correct.</p> <p>19 Q. And after 90 days, it was considered</p> <p>20 seriously delinquent?</p> <p>21 A. I believe 90 days is considered</p> <p>22 seriously delinquent. It could become more seriously</p> |

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| <p style="text-align: right;">Page 97</p> <p>1 delinquent after 90 days, or it could become current.</p> <p>2 Q. Fair enough.</p> <p>3 You'd agree that delinquency rates can</p> <p>4 be important in assessing credit risk?</p> <p>5 A. Yes.</p> <p>6 Q. And your understanding and recollection</p> <p>7 is that Freddie Mac disclosed in single-family</p> <p>8 portfolio the delinquency rates -- the 90-day</p> <p>9 delinquency rates?</p> <p>10 A. Yes.</p> <p>11 Q. Do you know how those delinquency rates</p> <p>12 were calculated by Freddie Mac?</p> <p>13 A. I believe so.</p> <p>14 Q. And what's your understanding?</p> <p>15 A. My understanding is that a loan is</p> <p>16 considered 90-days delinquent if a scheduled payment</p> <p>17 has not been made for 90 days beyond its due date.</p> <p>18 Q. Do you know whether Freddie Mac's</p> <p>19 reported delinquency rates included loans that were</p> <p>20 renegotiated by Freddie Mac?</p> <p>21 A. I don't know one way or another.</p> <p>22 Q. Do you know whether Freddie Mac had a</p> | <p style="text-align: right;">Page 99</p> <p>1 rates by 80 percent or more, if I remember correctly.</p> <p>2 So it does apparently reduce credit risk and expected</p> <p>3 losses, at least on average.</p> <p>4 Q. Do you know whether other financing</p> <p>5 institutions in reporting delinquency rates during</p> <p>6 the relevant period considered the original loan</p> <p>7 terms or negotiated loan terms in reporting their</p> <p>8 delinquency rates?</p> <p>9 A. No.</p> <p>10 Q. Do you know what SISA loans are?</p> <p>11 A. The term sounds familiar, but I don't</p> <p>12 remember.</p> <p>13 Q. How about NINA loans?</p> <p>14 A. I think NI stands for no income. I</p> <p>15 don't recall what NA stands for. Maybe no assets. I</p> <p>16 don't know.</p> <p>17 Q. Okay. So I take it, it would be fair to</p> <p>18 say you've done no analysis in this case relative to</p> <p>19 NINA or SISA loans?</p> <p>20 A. That would be fair, yes.</p> <p>21 Q. Have you seen any disclosures of how</p> <p>22 many NINA loans were in the single-family portfolio</p> |
| <p style="text-align: right;">Page 98</p> <p>1 loan mitigation program?</p> <p>2 A. Yes, I remember that discussion in</p> <p>3 Mr. Syron's speech to the Commonwealth Club of</p> <p>4 California.</p> <p>5 Q. I think you may have answered this</p> <p>6 already with your prior answer, but I don't know one</p> <p>7 way or another. But let's suppose Freddie Mac has a</p> <p>8 mortgage where the homeowner hasn't paid in 120 days.</p> <p>9 That would be considered in the serious</p> <p>10 delinquent 90-day plus category, correct?</p> <p>11 A. Yes, that's my understanding.</p> <p>12 Q. And let's suppose that Freddie Mac</p> <p>13 negotiates an extension allowing that homeowner to</p> <p>14 begin payment in 60 days. Once that extension is</p> <p>15 negotiated, before the 60 days are up, do you know</p> <p>16 whether Freddie Mac considered that loan as being</p> <p>17 delinquent?</p> <p>18 A. As a factual matter and it is accounted</p> <p>19 for in its reported delinquency ratios, I do not know</p> <p>20 that. I do recall Mr. Syron, I believe, in that</p> <p>21 Commonwealth Club of California speech, saying that</p> <p>22 they found that such accommodations cut foreclosure</p> | <p style="text-align: right;">Page 100</p> <p>1 during the relevant period?</p> <p>2 A. I'm sorry. Can you repeat your</p> <p>3 question?</p> <p>4 Q. Have you seen any disclosures with</p> <p>5 regard to how many NINA loans were in the</p> <p>6 single-family portfolio during the relevant period?</p> <p>7 A. No.</p> <p>8 Q. Would that be the same with regard to</p> <p>9 SISA loans?</p> <p>10 A. Yes.</p> <p>11 Q. Do you know whether Freddie Mac</p> <p>12 disclosed the number or percentage of reduced</p> <p>13 documentation loans in its single-family portfolio</p> <p>14 during the relevant period?</p> <p>15 MR. BLOCK: Objection to form.</p> <p>16 THE WITNESS: I'm sorry. Can you repeat</p> <p>17 your question?</p> <p>18 BY MR. MARKOVITS:</p> <p>19 Q. Do you know whether Freddie Mac</p> <p>20 disclosed the number or percentage of reduced</p> <p>21 documentation loans in its single-family portfolio</p> <p>22 during the relevant period?</p> |

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| <p style="text-align: right;">Page 101</p> <p>1 MR. BLOCK: Same objection.</p> <p>2 THE WITNESS: Yes.</p> <p>3 BY MR. MARKOVITS:</p> <p>4 Q. And did they?</p> <p>5 A. Yes.</p> <p>6 Q. Do you know whether Freddie Mac's public</p> <p>7 disclosures relating to reduced documentation loans</p> <p>8 differed from its internal assessment?</p> <p>9 A. I've seen no such evidence in the</p> <p>10 materials I've reviewed which I defined for you</p> <p>11 before.</p> <p>12 Q. Do you know whether the delinquency</p> <p>13 rates for reduced documentation loans were higher</p> <p>14 than loans with documentation during the relevant</p> <p>15 period?</p> <p>16 MR. BLOCK: Objection to form.</p> <p>17 THE WITNESS: Again, I don't recall</p> <p>18 specifics, but it stands to reason that if a</p> <p>19 loan is low documentation in the sense that</p> <p>20 makes it a riskier loan, then it would have a</p> <p>21 higher probability of being delinquent.</p> <p>22</p> | <p style="text-align: right;">Page 103</p> <p>1 and that contract defines guaranty fees and other</p> <p>2 terms during the duration of that contract.</p> <p>3 And then they also bought loans in what</p> <p>4 is called the bulk channel, where if a mortgage</p> <p>5 banker were to offer a bid take on, say, 20 loans,</p> <p>6 and Freddie Mac bids on some or all of those 20</p> <p>7 loans, that that bulk channel obviously provides an</p> <p>8 opportunity to set the price of the loan and guaranty</p> <p>9 fees in accordance with the assessed risk in</p> <p>10 realtime.</p> <p>11 Whereas for flow channel, that</p> <p>12 adjustment, subject to party's mutual bargaining</p> <p>13 power, would be expected to happen with a lag.</p> <p>14 Q. Generally speaking, though, would you</p> <p>15 understand that quote to mean that Freddie was</p> <p>16 pricing for the higher risk of the products?</p> <p>17 A. Yes. And the sense was that Freddie was</p> <p>18 pricing to the market because they competitively bid</p> <p>19 for loans in the marketplace. So the market</p> <p>20 determines the price, and Freddie, of course,</p> <p>21 determines what its bid is going to be.</p> <p>22 And generally, as an economist, you</p> |
| <p style="text-align: right;">Page 102</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. Can you turn to paragraph 37 of your</p> <p>3 report? If I can direct your attention to note 62.</p> <p>4 Are you there, Doctor?</p> <p>5 A. Yes.</p> <p>6 Q. And there's a parenthetical that has a</p> <p>7 long quote about nontraditional mortgage products.</p> <p>8 And this is from the Freddie Mac 2006 annual report.</p> <p>9 And then at the very end of that quote after the</p> <p>10 ellipsis, it says: "We expect each of these products</p> <p>11 to default more often than traditional products, and</p> <p>12 we consider this when determining our credit and</p> <p>13 guaranty fees."</p> <p>14 Do you see that?</p> <p>15 A. Yes.</p> <p>16 Q. What did you understand that report to</p> <p>17 mean when it says: "We considered this when</p> <p>18 determining our credit and guaranty fees"?</p> <p>19 A. So it is my understanding that Freddie</p> <p>20 Mac bought loans through -- or in two ways. One is</p> <p>21 the so-called flow channel, where they have contracts</p> <p>22 with specific loan originators for a period of time,</p> | <p style="text-align: right;">Page 104</p> <p>1 could expect market price of a loan. Let's say a</p> <p>2 loan has a certain unpaid principal balance, whether</p> <p>3 various investors bid part of the loan, meaning,</p> <p>4 100 percent off the unpaid principal balance or more</p> <p>5 or less than that, depends on those investors</p> <p>6 evaluation of credit characteristics of that loan.</p> <p>7 And Freddie participated in that marketplace. So in</p> <p>8 that sense, of course, pricing does depend on</p> <p>9 riskiness of the loan that Freddie Mac buys.</p> <p>10 In addition, as I said, there are</p> <p>11 guaranty fees that could vary by nature of product</p> <p>12 and nature of investor, and sometimes subject to</p> <p>13 contractual arrangements between Freddie Mac and</p> <p>14 certain seller servicers who sold loans to Freddie</p> <p>15 Mac.</p> <p>16 Q. Do you know whether Freddie Mac was</p> <p>17 being compensated for its higher risk purchases</p> <p>18 during the relevant period?</p> <p>19 MR. BLOCK: Objection to form.</p> <p>20 THE WITNESS: Yes. On average, it was,</p> <p>21 in the way that I explained.</p> <p>22</p> |

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| <p style="text-align: right;">Page 105</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. And did you investigate whether Freddie</p> <p>3 Mac was being compensated for its purchase of</p> <p>4 nontraditional higher risk loans during the relevant</p> <p>5 period?</p> <p>6 MR. BLOCK: Objection to form.</p> <p>7 THE WITNESS: I don't know what you mean</p> <p>8 by the word "investigate" in your question.</p> <p>9 BY MR. MARKOVITS:</p> <p>10 Q. Well, did you look into whether to what</p> <p>11 extent Freddie Mac was being compensated for its</p> <p>12 purchases of nontraditional loans that are higher</p> <p>13 risk during the relevant period?</p> <p>14 A. I did see certain internal documents</p> <p>15 that Mr. Shapiro talked about, but I did not do any</p> <p>16 econometric analysis mapping the compensation to</p> <p>17 Freddie Mac coming from two sources. One, the price</p> <p>18 it paid for a certain loan. If you buy a loan with</p> <p>19 unpaid principal balance of a \$100,000 for 98 percent</p> <p>20 of that amount, say 98, and then you put it in a</p> <p>21 security where, after your guaranty -- let's -- to</p> <p>22 keep the example simple -- is it sells at par, namely</p> | <p style="text-align: right;">Page 107</p> <p>1 HUD-mandated loans. And there was some discussion</p> <p>2 whether, in addition to the benefits Freddie derives</p> <p>3 from fulfilling its requirements under HUD</p> <p>4 requirements, whether the additional compensation it</p> <p>5 was getting was necessarily commensurate with what</p> <p>6 the price of that loan would have been if it did not</p> <p>7 have those HUD-related benefits attached to it.</p> <p>8 And that's my understanding of how</p> <p>9 market works when you have a loan that is called a</p> <p>10 CRA original loan, for example. That loan is</p> <p>11 considered as a credit for an investor, whether it's</p> <p>12 Freddie Mac or Citibank --</p> <p>13 Q. Far afield here again. Far afield.</p> <p>14 A. Okay. If you say so.</p> <p>15 Q. I do.</p> <p>16 Can you tell me, do you know whether,</p> <p>17 internally, Freddie Mac, during the relevant period,</p> <p>18 made the determination that it was purchasing higher</p> <p>19 risk, nontraditional products without being</p> <p>20 compensated for that higher risk?</p> <p>21 A. Can you repeat that question, please?</p> <p>22 I'm sorry.</p> |
| <p style="text-align: right;">Page 106</p> <p>1 100,000. In that case, Freddie Mac has been</p> <p>2 compensated \$2,000 for that loan being riskier.</p> <p>3 In addition, Freddie Mac charged</p> <p>4 guaranty fees. And those are, by their very nature,</p> <p>5 somewhat more sticky in the way that I described over</p> <p>6 a short period of time, but generally reflected</p> <p>7 competitive conditions in the marketplace, which, in</p> <p>8 turn, depends on the nature of the product that</p> <p>9 Freddie Mac bought.</p> <p>10 So in that sense, yes, Freddie Mac was</p> <p>11 compensated, because that's how markets work for</p> <p>12 higher risk loan products that it was buying in order</p> <p>13 to be part of its single-family portfolio.</p> <p>14 Q. Do you know whether during the relevant</p> <p>15 period, internal assessments at Freddie Mac indicated</p> <p>16 that it was purchasing higher risk nontraditional</p> <p>17 products without being compensated for that higher</p> <p>18 risk?</p> <p>19 A. Not any general statement. I know</p> <p>20 Mr. Shapiro referred to an internal document where</p> <p>21 there was a reference to certain loan products that</p> <p>22 Freddie Mac participated in in order to meet its</p> | <p style="text-align: right;">Page 108</p> <p>1 Q. Sure. Do you know whether, during the</p> <p>2 relevant period, Freddie Mac was purchasing higher</p> <p>3 risk, nontraditional mortgage products without being</p> <p>4 compensated for that higher risk?</p> <p>5 A. Yes, I've seen no evidence that Freddie</p> <p>6 Mac was not --</p> <p>7 MR. GOLDFARB: Objection.</p> <p>8 THE WITNESS: Sorry. Thank you.</p> <p>9 I'm not aware of any evidence that, when</p> <p>10 taken into account the additional regulatory</p> <p>11 requirement benefits, Freddie Mac was buying any</p> <p>12 higher risk loans for less than adequate</p> <p>13 compensation determined in the marketplace.</p> <p>14 BY MR. MARKOVITS:</p> <p>15 Q. You would agree that a factor the market</p> <p>16 would look at in assessing credit risk is whether</p> <p>17 Freddie Mac was being adequately compensated when it</p> <p>18 purchased higher risk mortgages, correct?</p> <p>19 A. Has it been about an hour, because I'm</p> <p>20 losing track of the question. So would you please</p> <p>21 indulge me and repeat it, and then I think it might</p> <p>22 be a good time for a break.</p> |

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| <p style="text-align: right;">Page 109</p> <p>1 Q. Yeah. This was actually your question, 2 Doctor, so this is my last question and then we'll 3 both get something to eat. 4 You would agree that one factor the 5 market would look at in assessing credit risk is 6 whether Freddie Mac was being adequately compensated 7 when it purchased higher risk mortgages during the 8 relevant period? 9 A. Yes. 10 MR. MARKOVITS: Wow. I'm going to end 11 on a yes. 12 THE WITNESS: Happy to please, Counsel. 13 MR. MARKOVITS: Let's break for lunch. 14 (Brief recess.) 15 MR. MARKOVITS: Back on the record. 16 BY MR. MARKOVITS: 17 Q. Dr. Bajaj, I hope they gave you a good 18 lunch. 19 A. Thank you. They did. 20 Q. In your report, you note that during the 21 class certification phase, you analyzed and opined on 22 price impact. And your conclusion at that time was</p> | <p style="text-align: right;">Page 111</p> <p>1 attack, hid truthful disclosures as the attack 2 alleged it made on November 20th. 3 While I consider that theory to be 4 highly dubious -- not in a value judgment sense, as 5 an economic matter -- there is additional evidence 6 that shows, regardless, there's not even a 7 significant price change when you look at the 8 November 20th disclosure along with the subsequent 9 rebound on Freddie's stock when the market's fear 10 about Freddie being able to access capital market 11 were shown to be unfounded. 12 Q. We drifted away from the yes-or-no 13 answers we got right before lunch. 14 So the answer is, yes, assuming there's 15 no price impact, as the court found, it would be 16 impossible to find that loss causation exists, in 17 your opinion, correct? 18 A. I think that's a fair statement, yes. 19 Q. In your view, would it be possible for 20 an expert to provide an opinion that's consistent 21 with the class certification order where that opinion 22 concluded a calculation of inflation in Freddie Mac's</p> |
| <p style="text-align: right;">Page 110</p> <p>1 that the alleged misrepresentations and omissions had 2 no impact on the price of Freddie Mac's common stock 3 over the relevant period; is that fair to say? 4 A. I think so, yes. 5 Q. Would it also be fair to say that your 6 opinion that there is a lack of price impact has not 7 changed since that time? 8 A. Yes. 9 Q. And as you note in your report -- and 10 you can look back at paragraph 16 if you'd like -- 11 the court agreed with your opinion on price impact, 12 and held that a lack of price impact would rebut any 13 presumption of reliance, right? 14 A. Yes. 15 Q. Assuming there is no price impact as the 16 court found, it would be impossible to find that loss 17 causation exists, correct? 18 A. I believe that is a correct statement, 19 with the caveat that through Dr. Tabak, plaintiff 20 seems to offer a theory that says lack of price 21 impact is not really lack of price impact if, in 22 essence, Freddie Mac, contrary to allegations and</p> | <p style="text-align: right;">Page 112</p> <p>1 stock price during the relevant period that was 2 greater than zero? 3 MR. BLOCK: Objection to form. 4 THE WITNESS: Well, if there was no 5 price impact of alleged inflationary statements, 6 then the price was never inflated, hence there 7 couldn't be any loss causation. Furthermore, if 8 there was no price drop, that can be -- that can 9 be tied to alleged corrective disclosures, then 10 that further would make it impossible to, as a 11 matter of economic logic, compute damages. 12 BY MR. MARKOVITS: 13 Q. And your opinion at class certification 14 was based in large part on your finding -- or based 15 in part, let's put it that way -- on your finding 16 that there was no back-end price impact on 17 November 20th, 2007, correct? 18 A. Well, I would say it was based equally 19 on the finding that there was no, quote-unquote, 20 front-end price impact and there was also no back-end 21 price impact. 22 Q. That's why I qualified to say "in part."</p> |

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| <p style="text-align: right;">Page 113</p> <p>1 All right. Okay.</p> <p>2 A. I'll take it.</p> <p>3 Q. And your opinion that there was no</p> <p>4 back-end price impact was based, at the time,</p> <p>5 primarily upon your review of the analyst reports</p> <p>6 that were published on or shortly after</p> <p>7 November 20th, 2007, correct?</p> <p>8 A. Can you repeat the question, please?</p> <p>9 Q. Your opinion that there was no back-end</p> <p>10 price impact in your prior report was based primarily</p> <p>11 upon your review of analyst reports that were</p> <p>12 published on or shortly after November 20th, 2007?</p> <p>13 A. No, because of your use of the word</p> <p>14 "primarily." Because equally key to my conclusions</p> <p>15 and analysis was Freddie Mac's prior disclosures,</p> <p>16 which would have formed a basis of what the market</p> <p>17 would be reacting to on November 20th. So it was</p> <p>18 both, Freddie Mac's historical disclosures, as well</p> <p>19 as market's reaction to those disclosures. And I</p> <p>20 should add also, given the market environment at that</p> <p>21 time, that would have informed inappropriate</p> <p>22 interpretation of that alleged event.</p> | <p style="text-align: right;">Page 115</p> <p>1 market efficiency, you can explain anything -- that</p> <p>2 once you take into account market's nervousness of</p> <p>3 Freddie's ability to access markets, which was</p> <p>4 shortly thereafter resolved, there is nothing left to</p> <p>5 explain.</p> <p>6 So to the extent there was something</p> <p>7 left to be explained, then the question would be how</p> <p>8 much of it could be due to previously disclosed risk,</p> <p>9 and how much of it plaintiff could argue was due to</p> <p>10 materialization of previously undisclosed risk. But</p> <p>11 we don't even get there.</p> <p>12 Q. So just to make sure I understand. It</p> <p>13 seems to me -- and you can correct me if I'm wrong --</p> <p>14 that your current opinion is, in part, that there was</p> <p>15 no price impact -- back-end price impact on</p> <p>16 November 20th, 2007 based upon the review you did of</p> <p>17 the analyst reports. That's one of the factors that</p> <p>18 you believe provides evidence of a back-end price</p> <p>19 impact on November 20th, 2007, correct?</p> <p>20 A. Only in part, as I previously told you.</p> <p>21 It was not just limited to review of analyst reports.</p> <p>22 Q. I understand, and that's why I said "in</p> |
| <p style="text-align: right;">Page 114</p> <p>1 Q. And in your current report, you're also</p> <p>2 providing an opinion that there was no back-end price</p> <p>3 impact, correct?</p> <p>4 A. In my -- my conclusions in my current</p> <p>5 report are sufficient to conclude that there was no</p> <p>6 back-end price impact. The way I understand the</p> <p>7 scope of my engagement was that it went beyond price</p> <p>8 impact analyst into loss causation analysis. And not</p> <p>9 only do I still maintain that November 20th</p> <p>10 disclosures, as alleged by plaintiffs, could have</p> <p>11 caused the price drop on the 20th, I had previously</p> <p>12 said that those -- that price drop could be related</p> <p>13 to markets' fears about Freddie Mac's ability to</p> <p>14 raise capital, and they could involve realization of</p> <p>15 disclosed risk.</p> <p>16 And the work I have done now says that</p> <p>17 of those at the potential explanations, alleged</p> <p>18 materialization of undisclosed risk, realization of</p> <p>19 previously disclosed risk, and market's nervousness</p> <p>20 about Freddie's ability to raise capital and access</p> <p>21 capital markets, I now have conclusive evidence that</p> <p>22 you can explain -- to the extent without assuming</p> | <p style="text-align: right;">Page 116</p> <p>1 part."</p> <p>2 A. I don't think you said that in your</p> <p>3 question, by the way.</p> <p>4 Q. I did, but --</p> <p>5 A. Okay. Sorry. I misheard it then.</p> <p>6 Q. Okay. And another part on your opinion</p> <p>7 that there was no back-end price impact on</p> <p>8 November 20th, 2007 is based upon your opinion that</p> <p>9 what happened there was, in part, the realization of</p> <p>10 previously disclosed risks, correct?</p> <p>11 A. I said that could be the case.</p> <p>12 Q. Are you providing an opinion -- because</p> <p>13 it appeared to me in reading your report that you</p> <p>14 were providing an opinion that on November 20th, 2007</p> <p>15 that there was a realization of previously disclosed</p> <p>16 risks; am I incorrect?</p> <p>17 A. Yes, you are incorrect.</p> <p>18 Q. Okay. You are not providing that</p> <p>19 opinion?</p> <p>20 A. Well, I am providing an opinion that if</p> <p>21 there was anything to be explained on November 20th,</p> <p>22 it could well be explained -- and I understand it's</p> |

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| <p style="text-align: right;">Page 117</p> <p>1 plaintiff's burden to show that the explanation was</p> <p>2 realization of previously undisclosed risk. But the</p> <p>3 price drop on that day could be explained by</p> <p>4 materialization of disclosed risk, in addition to</p> <p>5 market's nervousness about whether Freddie will</p> <p>6 maintain its access to capital markets, which was</p> <p>7 crucial for Freddie Mac and --</p> <p>8 Q. Let's stop for a second. So "could be"</p> <p>9 is different than "would."</p> <p>10 Are you saying on November 20, 2007 the</p> <p>11 stock drop was, in part, because there were</p> <p>12 materialization of previously disclosed risk or</p> <p>13 because there could have been materialization of</p> <p>14 previously disclosed risk?</p> <p>15 A. My opinion is two-part. One, in my</p> <p>16 review of plaintiff's expert's work, I have seen no</p> <p>17 evidence to link the price drop on November 20th to</p> <p>18 alleged realization of previously undisclosed risk.</p> <p>19 And in particular, it entirely ignores plenty of</p> <p>20 evidence that it could also be caused by realization</p> <p>21 of previously disclosed risk. However --</p> <p>22 Q. Right. So are you or are you not -- are</p> | <p style="text-align: right;">Page 119</p> <p>1 losses of \$2 billion for its Q3 2007 and projected</p> <p>2 further losses in subsequent quarters, these losses</p> <p>3 and the price decline were related to the realization</p> <p>4 of previously disclosed risks of mortgage exposure."</p> <p>5 Did I read that correctly?</p> <p>6 A. You did.</p> <p>7 Q. And that's why you can, perhaps,</p> <p>8 understand my confusion here, because this seems to</p> <p>9 be saying that you're providing the opinion that</p> <p>10 those losses and price declines were related to the</p> <p>11 realization of previously disclosed risk of mortgage</p> <p>12 exposure, rather than just suggesting that it's a</p> <p>13 possibility?</p> <p>14 A. Well, I was careful in using the words</p> <p>15 "related to." The accounting losses on that day were</p> <p>16 clearly related to disclosure of, or rather,</p> <p>17 materialization of previously disclosed risk, as</p> <p>18 shown by the fact that Mr. Shapiro, based on public</p> <p>19 information alone, predicted those losses. So the</p> <p>20 sentence that you read is then further clarified in</p> <p>21 -- further down in that paragraph, which says --</p> <p>22 Q. No, I understand. Let me -- let me just</p> |
| <p style="text-align: right;">Page 118</p> <p>1 you giving the opinion that that the stock drop was,</p> <p>2 in part, due to realization of previously disclosed</p> <p>3 risk, or are you presenting that as a possibility?</p> <p>4 A. I'm saying it's a possibility that the</p> <p>5 plaintiff -- it's my understanding -- has a burden to</p> <p>6 exclude. It has not done so. And my review of the</p> <p>7 evidence rules out that the price drop on that day</p> <p>8 was due to disclosures of previously undisclosed</p> <p>9 risk. Furthermore, when you look at the rebound in</p> <p>10 Freddie Mac's stock price --</p> <p>11 Q. That's a separate question. Let stay on</p> <p>12 topic here. We'll get to that, I promise you.</p> <p>13 A. It doesn't matter to me whether you get</p> <p>14 to it or not. I was just trying to be complete, but</p> <p>15 you are in charge.</p> <p>16 Q. Yeah. I want to stick on the issue of</p> <p>17 this realization.</p> <p>18 Could you turn back to paragraph 22,</p> <p>19 page 11 of your report? Under your first opinion</p> <p>20 there, under summary of opinions 221. The second</p> <p>21 sentence reads: "While Freddie Mac's stock declined</p> <p>22 on November 20th, 2007 after Freddie Mac announced</p> | <p style="text-align: right;">Page 120</p> <p>1 stick on topic here, Doctor.</p> <p>2 So are you saying -- it appears to be</p> <p>3 that you're saying here that all of the losses that</p> <p>4 occurred on November 20th, 2007, these losses and the</p> <p>5 price decline were related to the realization of</p> <p>6 previously disclosed risks of mortgage exposure.</p> <p>7 Is that your opinion?</p> <p>8 A. So I think the way you worded your</p> <p>9 question, you said all of the losses. What I would</p> <p>10 like to say is there is no evidence that any of the</p> <p>11 losses represented materialization of previously</p> <p>12 disclosed risk. And if they weren't due to</p> <p>13 realization of previously undisclosed risk,</p> <p>14 obviously, price change could be related to</p> <p>15 materialization of previously undisclosed risk.</p> <p>16 That's what I'm saying.</p> <p>17 Q. All right. So you're saying it's almost</p> <p>18 a totality.</p> <p>19 You're saying because, in your opinion,</p> <p>20 there was no materialization of a previously</p> <p>21 undisclosed risk, that any of the losses had to be</p> <p>22 due to a realization of previously disclosed risk; is</p> |

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| <p style="text-align: right;">Page 121</p> <p>1 that correct?</p> <p>2 A. I would say that there is absolutely no</p> <p>3 evidence provided by the plaintiff --</p> <p>4 Q. No, no. That's not my question, Doctor.</p> <p>5 Are you saying that because there was no</p> <p>6 evidence of nondisclosure of material risk and,</p> <p>7 therefore, the entire loss must be due to the</p> <p>8 disclosure of previously disclosed risk?</p> <p>9 A. The way you worded the question now,</p> <p>10 yes. Since there is no evidence that there were any</p> <p>11 previously undisclosed risks that materialized, it</p> <p>12 follows, therefore, supported by extensive evidence,</p> <p>13 that there were materializations of previously</p> <p>14 disclosed risk.</p> <p>15 Q. Okay. And then it seems like -- and you</p> <p>16 can correct me if I'm wrong, and I'm sure you will --</p> <p>17 that in your current report, you're adding another</p> <p>18 factor, possibly both through the loss causation and</p> <p>19 price impact analysis -- but this idea of a stock</p> <p>20 rebound.</p> <p>21 Are you providing an opinion that</p> <p>22 because of this stock rebound that you've analyzed,</p> | <p style="text-align: right;">Page 123</p> <p>1 What I did not do in the previous</p> <p>2 report, because it was not necessary to do a</p> <p>3 forensic accounting exercise and say every</p> <p>4 dollar of loss Freddie Mac disclosed on</p> <p>5 November 20th, by some presumably subjective</p> <p>6 opinion, was due to previously existing</p> <p>7 disclosed risk.</p> <p>8 My opinion in the last case was based on</p> <p>9 ruling out the possibility that materialization</p> <p>10 of disclosed -- undisclosed risk had anything to</p> <p>11 do with price drop on November 20th. And I</p> <p>12 stand by that testimony.</p> <p>13 And what my report does now is we are</p> <p>14 past class certification stage. I'm not</p> <p>15 addressing price impact per se. Not that</p> <p>16 anything in my report is in any way, shape, or</p> <p>17 form inconsistent with my past report. My</p> <p>18 assignment right now, if you look at the scope</p> <p>19 of my report, is to provide loss causation</p> <p>20 analysis. What caused the price impact?</p> <p>21 That was not within the scope of my</p> <p>22 previous report. I wasn't asked, nor do I</p> |
| <p style="text-align: right;">Page 122</p> <p>1 that there was no back-end price impact on</p> <p>2 November 20th, 2007?</p> <p>3 A. You could confirm my earlier opinion</p> <p>4 that there was no back-end price impact on</p> <p>5 November 20th by my analysis of price rebound during</p> <p>6 the seven trading days after November 20th.</p> <p>7 Q. You negate price impact by showing a</p> <p>8 materialization of a disclosed risk. Would you agree</p> <p>9 with me you'd have to show not only that the risk was</p> <p>10 previously disclosed, but that it was sufficiently</p> <p>11 disclosed?</p> <p>12 A. Okay. Can you repeat the question,</p> <p>13 please?</p> <p>14 Q. To negate price impact by showing</p> <p>15 materialization of a risk that was previously</p> <p>16 disclosed, wouldn't you have to show not only the</p> <p>17 risk was previously disclosed, but that it was</p> <p>18 sufficiently disclosed?</p> <p>19 MR. BLOCK: Objection to form.</p> <p>20 THE WITNESS: I think that misstates my</p> <p>21 testimony in the previous case, and certainly</p> <p>22 misstates my opinions in this report.</p> | <p style="text-align: right;">Page 124</p> <p>1 understand it would be permitted at class</p> <p>2 certification stage, to answer questions as to</p> <p>3 what then caused the price drop.</p> <p>4 I only said there is no price impact</p> <p>5 because it could be what the plaintiff alleged.</p> <p>6 And now, my assignment is -- and I have</p> <p>7 provided -- loss causation analysis, which</p> <p>8 answers the question, well, then, what did cause</p> <p>9 the price drop to the extent you can attribute</p> <p>10 price drop in a marketplace where there's been</p> <p>11 no demonstration of market efficiency. But that</p> <p>12 is -- while important aside, that is a caveat</p> <p>13 that I want to note.</p> <p>14 BY MR. MARKOVITS:</p> <p>15 Q. Right. Just so we're clear, Doctor.</p> <p>16 You're not providing an opinion on the sufficiencies</p> <p>17 -- the sufficiency of the prior disclosures by</p> <p>18 Freddie Mac in this case?</p> <p>19 A. Can you clarify what you mean by</p> <p>20 "sufficiency of prior disclosures"?</p> <p>21 Q. Yes. Suppose -- let's take this</p> <p>22 example. Suppose there's significant credit risk</p> |

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| <p style="text-align: right;">Page 125</p> <p>1 that is undisclosed, and Freddie Mac, somewhere in a 2 financial statement in a footnote, says, "We may face 3 some credit risk." Courts and a jury would probably 4 say that's an insufficient disclosure to overcome a 5 material misrepresentation or omission relating to 6 the credit risk you face, that classic example that 7 you're coming up on the Grand Canyon as opposed to a 8 small ditch.</p> <p>9 So the question I have is: Are you 10 opining on the sufficiency of Freddie Mac's 11 disclosures with regard to the various allegations, 12 the credit risk, the underwriting, the fraud 13 detection, the capital position, the loan analysis 14 software?</p> <p>15 Are you providing any opinion as to the 16 sufficiency of any prior disclosures that were made 17 by Freddie Mac with regard to those issues?</p> <p>18 MR. BLOCK: Objection to form.</p> <p>19 THE WITNESS: So the way you phrase the 20 question, and the way you defined sufficiency, 21 you're talking about a determination of facts 22 that are for the fact finders in this case to</p> | <p style="text-align: right;">Page 127</p> <p>1 all the information that was known to investors 2 getting into November 20th. And in light of that 3 information, look at the event of November 20th and 4 conclude from a financial economics point of view 5 whether there is any loss causation or whether or not 6 alleged disclosure deficiencies were economically 7 significant.</p> <p>8 And analyst reports, and along with 9 firm's financials, along with market data, along with 10 testimony of some of the officers to the extent I 11 reviewed it, all of them, taken together, led me to 12 the conclusions I expressed in this report.</p> <p>13 Q. So getting back to the analyst reports, 14 what were you looking for in your review the analyst 15 reports to determine whether OPERS allegations were 16 reflected in those reports?</p> <p>17 A. So I was seeing if whether, consistent 18 with tax allegations, was there any evidence in 19 contemporaneous analyst reports, including from 20 plaintiff's expert, Mr. Shapiro, that said, "Wow. We 21 learned there was chockfull of undisclosed subprime 22 that explains these losses," or "They were chock-full</p> |
| <p style="text-align: right;">Page 126</p> <p>1 conclude, and I'm not offering any legal 2 opinions in this case.</p> <p>3 But what I am doing is providing 4 evidence that, based upon objective data, based 5 on objective understanding of what market knew 6 getting into November 20th, what market learned 7 on November 20th, how market interpreted the 8 announcement of November 20th, there is no 9 evidence that any of the alleged previously 10 undisclosed risk caused the plaintiff's loss, as 11 alleged by plaintiff based on the price drop on 12 November 20th.</p> <p>13 BY MR. MARKOVITS:</p> <p>14 Q. All right. Let's talk about your 15 opinion as it relates to the review of the analyst 16 reports and other market information.</p> <p>17 What was your methodology in addressing 18 either price impact or loss causation by review of 19 the 317 analyst reports you cited in Appendix 2?</p> <p>20 A. So my methodology in that regard was the 21 same methodology that any financial economist doing a 22 loss causation analysis would follow. Namely, review</p> | <p style="text-align: right;">Page 128</p> <p>1 of Alt-A or other high-risk loans that was not 2 previously disclosed," or that somehow Freddie 3 shocked the market about its capital position in a 4 way that would be a surprise to anyone, including 5 Mr. Shapiro, who was looking at companies' 6 disclosures prior to that date.</p> <p>7 Mr. Shapiro, himself, forecasted in his 8 October 24 report that Freddie Mac, by end of the 9 third quarter, would not have capital cushion over 10 and above OFHEO's 30 percent surplus capital mandate. 11 Before November 20th, he forecasted that.</p> <p>12 And there was no surprise, contrary to 13 his testimony now that he expressed in his report on 14 November 20th or any of the subsequent reports 15 through May of 2008, that said, "Wow. I expected 16 losses on November 20th, but I didn't expect future 17 losses were going to be forecasted."</p> <p>18 And if you look at the indicators of 19 credit risk between September 30th, 2007 which was 20 the end of 3Q, which was announced on November 20th, 21 and November 20th, when that announcement took place, 22 almost two months had passed into the fourth quarter</p> |

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| <p style="text-align: right;">Page 129</p> <p>1 which had not yet been announced, anybody looking at</p> <p>2 what was happenings to ADX spreads, what was</p> <p>3 happening to option adjusted spreads, what was</p> <p>4 happening to delinquencies, what were new</p> <p>5 developments disclosed by Freddie Mac on increased</p> <p>6 delinquency rates, and in particular on 2006 and 2007</p> <p>7 mortgages, et cetera et cetera, that there wouldn't</p> <p>8 be further losses beyond third quarter.</p> <p>9 So those are the kind of things that I</p> <p>10 looked at, and that is my methodology.</p> <p>11 Q. Well, let's take underwriting as an</p> <p>12 example. What would you look for in an analyst</p> <p>13 report to determine whether it reflected OFHEO's</p> <p>14 allegations regarding Freddie Mac's</p> <p>15 misrepresentations or omissions regarding</p> <p>16 underwriting?</p> <p>17 A. Well, if the analysts were somehow</p> <p>18 surprised that Freddie Mac was buying loans that had</p> <p>19 not originally been run-through its LP model, and</p> <p>20 that would have been totally illogical inference</p> <p>21 based on what how market participants knew and how</p> <p>22 the market worked. And this was a big market</p> | <p style="text-align: right;">Page 131</p> <p>1 the earnings calls.</p> <p>2 Mr. Shapiro was very concerned that</p> <p>3 capital constraints, if Freddie is not able to cap</p> <p>4 the market, could hinder its growth opportunities.</p> <p>5 And he mentioned that repeatedly on November 20th and</p> <p>6 after November 20th, but he didn't once mention --</p> <p>7 Q. But --</p> <p>8 A. Let me finish, Counsel.</p> <p>9 Q. Sure.</p> <p>10 A. He didn't once mention that there was</p> <p>11 any information that he or investment companies</p> <p>12 learned on November 20th that had to do with any</p> <p>13 purported underlying defects. And he's still not</p> <p>14 produced one iota of evidence saying that there were,</p> <p>15 in fact, any underwriting defects, period.</p> <p>16 All that we've seen are allegations</p> <p>17 that, based on all the review I've done, have no</p> <p>18 foundation in facts.</p> <p>19 Q. All right. Did you review the OFHEO</p> <p>20 report with regard to what they found on their review</p> <p>21 of Freddie Mac's underwriting during the relevant</p> <p>22 period?</p> |
| <p style="text-align: right;">Page 130</p> <p>1 involving millions of loans, and analysts, such as</p> <p>2 Mr. Shapiro, who covered the other mortgage</p> <p>3 companies.</p> <p>4 I see it -- I see the fact that none of</p> <p>5 the analysts asked any questions about OFHEO's</p> <p>6 allegations about reported underwriting defects as an</p> <p>7 indication that there were no revelations of</p> <p>8 underwriting defects on that day, as alleged by</p> <p>9 OPERS.</p> <p>10 Q. So let me ask you this: Were you</p> <p>11 looking for, essentially, a mirror of the exact</p> <p>12 allegations in the Third Amended Complaint?</p> <p>13 A. No. What I was looking for was --</p> <p>14 Q. Okay. Then "no" is fine.</p> <p>15 Were you looking just for the topic? If</p> <p>16 an analyst mentioned underwriting, would that be</p> <p>17 sufficient in your view, or no?</p> <p>18 A. I don't know how to meaningfully answer</p> <p>19 that question as posed, Counsel. If something was</p> <p>20 important and surprising to the market, the analyst</p> <p>21 community is not known for being shy. You would have</p> <p>22 expected that to show up in the analyst reports, on</p> | <p style="text-align: right;">Page 132</p> <p>1 A. Would you like me to point to what</p> <p>2 report and what section?</p> <p>3 Q. Did you review the OFHEO -- just answer,</p> <p>4 did you review the OFHEO report that related to</p> <p>5 Freddie Mac's underwriting during the relevant</p> <p>6 period?</p> <p>7 MR. BLOCK: Objection to form.</p> <p>8 THE WITNESS: If I recall correctly,</p> <p>9 that was one of the documents cited by</p> <p>10 Mr. Shapiro, and yes, I did review it.</p> <p>11 BY MR. MARKOVITS:</p> <p>12 Q. Did you review a PricewaterhouseCoopers</p> <p>13 report after FHFA took over as conservator with</p> <p>14 regard to Freddie Mac's underwriting during the</p> <p>15 relevant period?</p> <p>16 A. No.</p> <p>17 Q. Do you know whether either of those</p> <p>18 reports addressed deficiencies in Freddie Mac's</p> <p>19 underwriting during the relevant period?</p> <p>20 A. I can speak to the OFHEO report. I</p> <p>21 can't speak to the PricewaterhouseCoopers report that</p> <p>22 you've mentioned because I have not seen it.</p> |

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| <p style="text-align: right;">Page 133</p> <p>1 Q. Okay. What is your understanding with 2 regards to the OFHEO report? 3 A. So my understanding is a regulator, 4 especially concerned with developing credit risk in 5 the marketplace, but even more generally, would 6 always tell financial companies they examine, "You 7 can improve further here. You can improve further 8 there. You can do this better." And I've not seen 9 any objective evidence saying that Freddie Mac 10 followed underwriting practices that would constitute 11 previously undisclosed risk that would not be based 12 on hindsight, but based on what was contemporaneous 13 evidence. 14 Q. Let me turn the question to the issue of 15 exposure to subprime and nontraditional mortgages. 16 Let me ask you this: On that issue, 17 when analyst reports or news, on November 20th or 18 afterwards, addressed an increase in losses resulting 19 from subprime or nontraditional mortgages, did you 20 ignore that in determining whether or not it was 21 related to plaintiff's allegations? 22 MR. BLOCK: Objection to form.</p> | <p style="text-align: right;">Page 135</p> <p>1 I also saw, and I quoted in my report, 2 that some of the analysts considered Freddie Mac's 3 disclosed investment in loans with FICO score below 4 620 or 660 as being, in some heuristic sense, 5 quote-unquote, subprime like, that when you look at 6 the losses on those loans, they were much below 7 subprime loans in private market capitalizations. 8 What I saw was FHFA -- no, I'm sorry -- 9 FCIC analysis that said the worst performing, worst 10 5 percent in terms of performance of agency loans had 11 better performance in terms of 6 percent default 12 rate -- or DQ rate, delinquency rate, than the best 13 5 percent among private-label security loans. 14 What I saw in FCIC report is that any 15 attempt or any allegation that, somehow, you could 16 just look at a Freddie Mac loan, and based on its 17 FICO score or some other internal designation, call 18 it subprime and say, "Aha, a lot of risk," would be 19 misplaced, because those loans performed a lot better 20 than subprime loans. 21 What I also saw in -- 22 Q. Give me one second, Doctor. Let me stop</p> |
| <p style="text-align: right;">Page 134</p> <p>1 THE WITNESS: That was a long question 2 with a lot of predicates. Could you please read 3 it back? 4 BY MR. MARKOVITS: 5 Q. Let me split it up. 6 In your review of the analyst reports 7 and other news on November 20th following your 8 analysis of price impact and loss causation, did you 9 see any analyst reports or articles or other news 10 that related to the plaintiff's allegations that 11 Freddie Mac failed to appropriately disclose its 12 exposure to subprime and nontraditional loans? 13 A. What I saw and what I quoted in my 14 report were analyst concerns that Freddie Mac's 15 previously disclosed \$120 billion-odd investment in 16 AAA-rated subprime loan backed securities, while they 17 may not currently -- meaning as of November 20th -- 18 lead to accounting charges, that if the market 19 deteriorated further, more severely than was 20 anticipated at that time, that those charges could 21 come and they could further pressure Freddie Mac's 22 capital position.</p> | <p style="text-align: right;">Page 136</p> <p>1 you there for a second. When you said -- 2 A. I want to complete my sentence, Counsel. 3 What I also saw, for Dr. Okongwu's analysis showed, 4 that the loans at issue that plaintiff categorizes as 5 subprime, that Mr. Shapiro uncritically accepts as 6 subprime, perform a lot more like prime loans than 7 subprime loans. I'm done. 8 Q. And when you say "performed better" -- 9 I wanted to stop you there so I didn't forget, but I 10 remembered. 11 When you say "perform better," what do 12 you mean by perform better? In terms of delinquency 13 rates? 14 A. Yes. 15 Q. All right. You'd agree with me that a 16 key piece of information that hit the market on 17 November 20th, 2007 was Freddie Mac's information 18 statement supplement? 19 A. Of course, among other pieces of 20 information. I don't know if I would characterize 21 that one as a key per se, but yeah, it was important, 22 yes.</p> |

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| <p style="text-align: right;">Page 137</p> <p>1 MR. MARKOVITS: Goldy, could you hand 2 out what's under Tab 1, which was previously 3 marked as Exhibit 60, and is the information 4 statement supplement dated November 20th, 2007. 5 BY MR. MARKOVITS: 6 Q. Dr. Bajaj, if you could take a look at 7 the document that was previously marked as 8 Exhibit 60. 9 You've reviewed this document before, 10 correct? 11 A. Yes. 12 Q. Could you look at page 1, the last full 13 paragraph, first sentence reads: "The credit 14 performance of subprime and Alt-A loans, as well as 15 other nontraditional mortgage products, deteriorated 16 sharply during 2007." 17 Do you see that? 18 A. Yes. 19 Q. And that's not limited, at least by its 20 terms, to subprime AAA tranches, correct? 21 A. I think it's talking about the entire 22 U.S. residential mortgage market.</p> | <p style="text-align: right;">Page 139</p> <p>1 enough a term from an economic perspective in talking 2 about loss causation analysis, but this is not -- 3 Q. Well, how can you determine -- let's 4 suppose this were directly related to Freddie Mac. 5 What would you use to determine whether 6 this could be viewed by a financial economist as a 7 recognition of a materialization of an unclosed risk 8 regarding subprime and nontraditional mortgages? 9 A. First of all, I note the counterfactual 10 nature of the assumption you're asking me to make. 11 This did not pertain to Freddie Mac. 12 Q. Right. 13 A. Second, for this to be evidence that 14 would be relevant to loss causation analysis by a 15 financial economist, it would have to be about 16 Freddie Mac. It would have to be tied to risk that 17 Freddie Mac allegedly did not disclose. You would 18 have to rule out that Freddie Mac's extensive 19 disclosures about exposure to subprime loans, 20 exposure to loans that some people may define as 21 subprime loans, about other kind of relatively more 22 risky products that were larger part of market share</p> |
| <p style="text-align: right;">Page 138</p> <p>1 Q. Okay. 2 A. As you can see in the heading above this 3 paragraph, and looking at the very first paragraph, 4 it's talking about the U.S. residential market. 5 Market continued to weaken. Next paragraph says: 6 "The national rate of home price appreciation." And 7 then it says: "Other trends in residential mortgage 8 market." And it talks about credit concerns and 9 liquidity issues, and then it talks about credit 10 performance of those loans. 11 At least as I sit here right now, I 12 don't see these being about Freddie Mac's loans. In 13 fact, the very next section heading is about our 14 business. 15 It seems to me that management is 16 discussing the overall U.S. mortgage market in this 17 section of the report, but I'm sure you'll correct me 18 if I'm wrong. 19 Q. No, I think you're correct there. So 20 based on that, you wouldn't link this to OFHEO's 21 allegations? 22 A. A link? This is not really precise</p> | <p style="text-align: right;">Page 140</p> <p>1 in 2006 and 2007, such as the IO loans that Freddie 2 Mac disclosed, such as the option-arm loans that 3 Freddie Mac disclosed, that it referred to none of 4 those known risk disclosures. It pertained to what 5 OPERS alleges to be previously undisclosed risk, and 6 it is not defendant's burden to prove that. 7 My understanding is it is plaintiff's 8 burden to prove that. It's not enough to say, well, 9 if we assume this and we assume that, it could be 10 related to something. 11 Q. I understand that. We've been through 12 this. I just want to clarify because there's two 13 different approaches that I want to understand which 14 one you're taking. You may be taking both. 15 It appeared to me in your last report, 16 prior report, 2017, that the focus -- your price 17 impact focus was on the analysts didn't react -- 18 there was no connection -- there was no connection 19 between the allegations and the -- what the analysts 20 talked about on November 20th or afterwards, and, 21 therefore, there was no price impact. 22 Now, there's a difference between saying</p> |

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| <p style="text-align: right;">Page 141</p> <p>1 that and saying, "Yeah, plaintiff alleged that they</p> <p>2 hadn't disclosed subprime and nontraditional --</p> <p>3 exposure to subprime and nontraditional loans, and</p> <p>4 maybe the analysts talked about it, but it was</p> <p>5 previously disclosed."</p> <p>6 Do you see the difference between those</p> <p>7 two approaches? Yes or no?</p> <p>8 A. You asked me a question that would</p> <p>9 probably take more than a page of the transcript with</p> <p>10 a lot of predicates built into it. Ask me a narrower</p> <p>11 question if you want a very focused answer.</p> <p>12 Q. All right. Here is the narrower</p> <p>13 question.</p> <p>14 Are you saying that none of the news</p> <p>15 that came out on November 20th, 2007, or shortly</p> <p>16 thereafter, related to the plaintiff's allegations</p> <p>17 regarding the insufficient disclosure of subprime and</p> <p>18 nontraditional loan credit risk?</p> <p>19 MR. BLOCK: Objection to form.</p> <p>20 THE WITNESS: So I'll go back and say</p> <p>21 the word "related to" is not at all</p> <p>22 well-defined. Did it talk about the same words,</p> | <p style="text-align: right;">Page 143</p> <p>1 offering an affirmative opinion that based on all the</p> <p>2 records evidence that I have discussed in my report,</p> <p>3 there is no evidence that any of the losses that</p> <p>4 plaintiff claims they suffered on November 20th as a</p> <p>5 result of materialization of undisclosed risk were</p> <p>6 due to plaintiffs allegations. And furthermore,</p> <p>7 there aren't even any losses.</p> <p>8 Q. All right. Let me take it a step at a</p> <p>9 time.</p> <p>10 Are you saying now, for loss causation</p> <p>11 purposes, that all of the risks regarding subprime</p> <p>12 and nontraditional mortgages were previously</p> <p>13 disclosed? All the risks that plaintiff alleged were</p> <p>14 not disclosed, were, in fact, previously disclosed?</p> <p>15 A. So as we said earlier on this morning,</p> <p>16 it's not my remit to determine --</p> <p>17 Q. I thought it is your remit on loss</p> <p>18 causation, Doctor? You just said --</p> <p>19 A. If you let me complete my sentence,</p> <p>20 Counsel, maybe you won't be so upset. It's not my</p> <p>21 remit to determine truth or falsity of Freddie Mac's</p> <p>22 disclosures. My remit as a financial economist is to</p> |
| <p style="text-align: right;">Page 142</p> <p>1 subprime? Yes. Here is what I concluded</p> <p>2 earlier, and here is what my current report</p> <p>3 says.</p> <p>4 What I concluded earlier in my class</p> <p>5 certification report on price impact analysis is</p> <p>6 that plaintiffs did not show -- not only</p> <p>7 plaintiffs did not show, because I understand at</p> <p>8 that stage, it is defendants' burden -- I could</p> <p>9 conclusively say, based on Freddie Mac's</p> <p>10 previous disclosures, Freddie Mac's</p> <p>11 November 20th disclosures, and market commentary</p> <p>12 on November 20th, that the price drop on</p> <p>13 November 20th was unrelated to plaintiff's</p> <p>14 allegations about materialization off previously</p> <p>15 undisclosed risk, period.</p> <p>16 BY MR. MARKOVITS:</p> <p>17 Q. All right. Fair enough.</p> <p>18 A. There is a second part. May I?</p> <p>19 Q. Go ahead.</p> <p>20 A. What I'm saying now -- because my</p> <p>21 agreement is not to do price impact analysis. My</p> <p>22 agreement is to do a loss causation analysis. So I'm</p> | <p style="text-align: right;">Page 144</p> <p>1 explain whether the allegations in the Third Amended</p> <p>2 Complaint caused plaintiff's losses on November 20th.</p> <p>3 Q. Let me stop you there, and I understand.</p> <p>4 And here's what's confusing me. And if it's going to</p> <p>5 confuse me, I guarantee it's going to confuse the</p> <p>6 jury, which is this:</p> <p>7 You seem to be saying that there was no</p> <p>8 loss causation because many of the risks that we</p> <p>9 allege had been previously disclosed. And what I'm</p> <p>10 simply trying to nail down, Doctor, is what risks are</p> <p>11 you providing in the opinion were previously</p> <p>12 disclosed?</p> <p>13 Are you providing an opinion that the</p> <p>14 risks relating -- credit risks relating to subprime</p> <p>15 and nontraditional loans were previously disclosed?</p> <p>16 MR. BLOCK: Objection to form.</p> <p>17 THE WITNESS: I think you lawyers call</p> <p>18 it a compound question. Could you break down</p> <p>19 the question?</p> <p>20 BY MR. MARKOVITS:</p> <p>21 Q. Are you providing an opinion that the</p> <p>22 risks relating to subprime and nontraditional loans</p> |

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| <p style="text-align: right;">Page 145</p> <p>1 were disclosed prior to November 20th, 2007?</p> <p>2 MR. BLOCK: Objection to form.</p> <p>3 THE WITNESS: I'm providing an opinion</p> <p>4 that there is no evidence -- plaintiffs haven't</p> <p>5 met their burden to show that any of the</p> <p>6 purported undisclosed risk materialized on</p> <p>7 November 20th.</p> <p>8 Furthermore, as an affirmative opinion,</p> <p>9 I am opining that no part of the price drop on</p> <p>10 November 20th that plaintiffs allege caused</p> <p>11 their losses could possibly be related to their</p> <p>12 allegations, because not only is there many --</p> <p>13 not only is their realization of previously</p> <p>14 disclosed risk on that day -- for example, one</p> <p>15 and a half billion dollar loss out of \$2 billion</p> <p>16 loss the credit reported that day --</p> <p>17 BY MR. MARKOVITS:</p> <p>18 Q. Doctor, you are far, far afield from my</p> <p>19 question. My question was very limited. Please</p> <p>20 restrict yourself to my question, if you could. The</p> <p>21 deposition will get done a little quicker. I will</p> <p>22 get back to my sick bed, and you can go home.</p> | <p style="text-align: right;">Page 147</p> <p>1 to underwriting, to the extent they materialized on</p> <p>2 November 20th, 2007, had been previously disclosed?</p> <p>3 A. I'm not seeing any evidence that there</p> <p>4 were any significant risks due to Freddie Mac's</p> <p>5 failure in underwriting. Freddie Mac did not</p> <p>6 underwrite loans. It bought loans underwritten by</p> <p>7 other people who provided reps and warranties to</p> <p>8 Freddie Mac.</p> <p>9 Q. Are you saying that Freddie Mac's</p> <p>10 failure to adhere to its underwriting standards, to</p> <p>11 the extent that those risks materialized on</p> <p>12 November 20th, 2007, had been previously disclosed?</p> <p>13 A. I'm saying Freddie Mac did make</p> <p>14 disclosures about these purported underwriting risks.</p> <p>15 I've seen no evidence that any risk related to</p> <p>16 Freddie Mac's underwriting were disclosed on that day</p> <p>17 that would qualify as previously undisclosed risk, as</p> <p>18 alleged by the plaintiff.</p> <p>19 If you're done with your train of</p> <p>20 thought, I think we've been going for about an hour.</p> <p>21 Whenever convenient, if we can take a little break.</p> <p>22 MR. MARKOVITS: Okay. That's fine.</p> |
| <p style="text-align: right;">Page 146</p> <p>1 A. Okay.</p> <p>2 Q. So here's the question: Are you</p> <p>3 providing an opinion -- you keep talking about</p> <p>4 previously disclosed risk and materialization of</p> <p>5 previously disclosed risk.</p> <p>6 All I'm asking is: Are you providing an</p> <p>7 opinion that the risk relating to subprime and</p> <p>8 nontraditional loans were previously disclosed to the</p> <p>9 extent they materialized on November 20th, 2007?</p> <p>10 MR. BLOCK: Objection to form.</p> <p>11 Compound.</p> <p>12 THE WITNESS: So thank you for asking</p> <p>13 the question that way. To the extent they</p> <p>14 materialized on November 20th, I am opining that</p> <p>15 no part of the risk that materialized on</p> <p>16 November 20th support plaintiff's allegations</p> <p>17 that it was materialization of previously</p> <p>18 undisclosed risk.</p> <p>19 BY MR. MARKOVITS:</p> <p>20 Q. Are you opining that the risk -- are you</p> <p>21 opining the credit risk associated with disclosures</p> <p>22 relating to underwriting, or Freddie Mac's adherence</p> | <p style="text-align: right;">Page 148</p> <p>1 THE WITNESS: Thank you.</p> <p>2 (Brief recess.)</p> <p>3 MR. MARKOVITS: Back on the record.</p> <p>4 BY MR. MARKOVITS:</p> <p>5 Q. Dr. Bajaj, can you look at page 2 of</p> <p>6 what was previously marked as Exhibit 60 in the</p> <p>7 information statement. And if you look at the fourth</p> <p>8 paragraph up that begins on September 30th, 2007,</p> <p>9 there's a sentence sort of right in the middle of</p> <p>10 that paragraph that says:</p> <p>11 "While market conditions provided</p> <p>12 favorable investment opportunities during the three</p> <p>13 months ending September 30, 2007, by the end of</p> <p>14 September 2007, we did not take full advantage of</p> <p>15 these opportunities given our capital position."</p> <p>16 Do you see that sentence?</p> <p>17 A. Yes.</p> <p>18 Q. Did you consider that sentence as</p> <p>19 linking the negative news announced on that day to</p> <p>20 OFHEO's allegations that Freddie Mac misrepresented</p> <p>21 the strength of its capital position?</p> <p>22 A. No. It was forecasted by analysts,</p> |

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| <p style="text-align: right;">Page 149</p> <p>1 including Mr. Shapiro, that with bidding off its 2 reserves and taking on credit losses, given the 3 market conditions, that Freddie Mac would be bumping 4 up on its 30 percent surplus OFHEO capital 5 requirement. And there was commentary, including by 6 Mr. Shapiro, that OFHEO should simply take away that 7 30 percent surplus capital requirement or give relief 8 on that so Freddie Mac could take advantage of future 9 opportunities. And Freddie Mac never told. Its 10 capital was known. It provided monthly disclosures 11 of its activities from where Mr. Shapiro, for 12 example, picked up that Freddie Mac was capital 13 constrained and sold some of its retained portfolio 14 in his October 24th announcement. 15 And Freddie Mac never told the investing 16 public that regardless of how bad the market gets and 17 how much losses we have, we'll be able to have enough 18 capital to continue to increase the size of our 19 balance sheet. So I don't see how it is related to 20 plaintiff's allegations. 21 Q. Is it your contention that the market 22 understood that in the three quarters ending</p> | <p style="text-align: right;">Page 151</p> <p>1 circles, Doctor. 2 What is sufficiently precise? How do 3 you relate plaintiff's allegations? What does it 4 take? Would it take Freddie Mac making a corrective 5 disclosure on November 20th and saying, "By the way, 6 we misrepresented the strength of our capital 7 position," or is the fact that it disclosed that its 8 capital position was not strong sufficient? 9 As a financial economist, you tell me 10 what are you looking for to connect the allegations 11 to what was being said on November 20th, 2007? 12 MR. GOLDFARB: Objection. 13 THE WITNESS: Could you read back the 14 question, please? 15 BY MR. MARKOVITS: 16 Q. You tell me. Let's take it with regard 17 to capital. You understand what plaintiff's 18 allegations are: That Freddie Mac misrepresented the 19 strength of its capital position. 20 Other than saying "related," what 21 words -- how specific do you have to be as a 22 financial economist to say that that was an</p> |
| <p style="text-align: right;">Page 150</p> <p>1 September 30th, 2007 that Freddie Mac didn't have 2 sufficient capital to take advantage of market 3 opportunities? 4 A. The market understood that that could 5 happen. In that sense, it was a disclosed risk which 6 did materialize, and Mr. Shapiro actually predicted, 7 before Freddie Mac had announced, that that risk had 8 materialized. 9 Q. This is one of the situations where I 10 just want to be clear. 11 So you're not saying this statement is 12 not related to plaintiff's allegations. 13 You're saying that this is one of those 14 situations where to the extent a risk materialized, 15 it had been previously disclosed? 16 A. So, Counsel, you keep using the words 17 "related to." We are all children of Adam and Eve 18 according to Biblical story. We are all related to 19 each other. To an economist, that's not sufficiently 20 precise. So maybe you can -- 21 Q. Well, that's what I'm trying to 22 understand, because you seem to be talking in</p> | <p style="text-align: right;">Page 152</p> <p>1 undisclosed risk that materialized on November 20th, 2 2007? 3 What in this document would Freddie Mac 4 have to say to link the allegations to the losses? 5 A. So, Counsel, you didn't engage me to 6 make the plaintiff's case. I don't think you would 7 have been happy with my opinions if you had. 8 Regardless -- 9 Q. Well, I think if we -- go ahead. 10 A. I am sorry. That's not fair. 11 Q. No, I apologize. That's not fair to 12 you, Doctor. Go ahead. 13 A. Yeah. Okay. That being said, if 14 Freddie Mac had said to the market, "We will have 15 sufficient capital, that without OFHEO providing us 16 additional relief to ride out a once in a lifetime 17 severe decline in home prices, freezing of liquidity 18 in the capital market, vagaries of GAAP accounting 19 that made us record one and a half billion dollars 20 impairment to capital," while ignoring an equal gain 21 realized on hedges on the other side of that interest 22 rate movement, so what did Freddie disclose</p> |

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| <p style="text-align: right;">Page 153</p> <p>1 previously that its statement that we no longer have 2 a cushion over and above OFHEO's 30 percent capital 3 requirement -- what is it that it said that amounted 4 to realization of previously disclosed risk? You 5 tell me. 6 Everything is related to everything in 7 that vague sense of the word. What -- where is the 8 misrepresentation that was corrected and it's the 9 TAC. It's your complaint, Third Amended Complaint 10 that says market learned the truth on that day about 11 Freddie Mac's capital position. 12 Whereas, the reality is, we know your 13 expert, Mr. Shapiro, predicted it before that date. 14 That other people predicted that there may be capital 15 constraints, unless OFHEO grants regulatory relief. 16 Freddie Mac timely reported that OFHEO refused to 17 grant capital relief, and then it did what it could 18 do under the circumstances to say, "Hey, we are going 19 to raise additional capital to overcome its 20 constraints." 21 How is this a basis for any allegations 22 of security fraud?</p> | <p style="text-align: right;">Page 155</p> <p>1 when, in fact, as was revealed on November 20th, 2 2007, they weren't able to take advantage of market 3 opportunities. 4 Would that be a sufficient link in your 5 view? 6 A. No. Because in your hypothetical, 7 you're not telling me what Freddie Mac's officers 8 exactly told the market on what date. And they 9 didn't say that, "Regardless of losses, we'll have 10 enough capital." And seven trading days later, they 11 solved that problem. So how did they misrepresent? 12 Q. Those are two -- we'll get that. Those 13 are two different issues on whether they 14 misrepresented something to cause them to be capital 15 constrained and then, by fortuity, seven days later 16 in a separate transaction, they were able to infuse 17 capital. Those are two separate incidents, but we 18 can get to that later. 19 My question now simply -- and I 20 understand your answer, you're saying no. That if 21 people were saying in the fall of 2007, that our 22 competitors are getting weaker and we're growing</p> |
| <p style="text-align: right;">Page 154</p> <p>1 Q. Well, you still haven't answered my 2 question, Doctor. And I can tell you how it's a 3 basis for an allegation, because you're 4 misrepresenting Mr. Shapiro's opinion and you're 5 misrepresenting the allegations. 6 Putting that aside, let's suppose that 7 in the fall of 2007 Freddie Mac's spokespeople are -- 8 when the market is concerned about the turmoil in the 9 market, Freddie Mac spokespeople are saying, "We're 10 going to be able to take advantage of this," when, in 11 fact, during that third quarter, they were not able 12 to take advantage of it because they were capital 13 constrained. 14 Would that be a sufficient 15 misrepresentation in your view? 16 A. You have to show me which -- 17 Q. No, take that as a hypothetical. If 18 they were saying, in the fall of 2007, "We have 19 strong capital position, and this is a situation 20 where our competitors may be getting weaker, but 21 we're getting electronic, and we're going to be able 22 to take advantage of marketplace opportunities,"</p> | <p style="text-align: right;">Page 156</p> <p>1 stronger, and that this is an opportunity for us, 2 when, in fact, it wasn't an opportunity given their 3 capital constraints, known to them but unknown to the 4 public at the time, you're saying that's not a 5 sufficient link? 6 A. It could be a sufficient link if that 7 statement said that there may be a few days while we 8 are in the process of raising our capital, that we 9 may not have enough capital. What the statements 10 that you mentioned in your hypothetical that "our 11 relative position was getting strong," was that 12 statement about over the coming year, over the coming 13 three years, over the coming three months? You have 14 to give me a proper hypothetical, not try to force it 15 out if me or a yes-or-no answer to some misleading 16 hypothetical. 17 Q. No, that's fine. If that's the answer 18 you want to give, that's fine. 19 All right. Let's look at page 4. The 20 second paragraph, the second sentence says: "The 21 increase in these delinquency transition rates 22 compared to our historical experience has been</p> |

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| <p style="text-align: right;">Page 157</p> <p>1 progressively worse for mortgage loans originated in</p> <p>2 2005 through 2007. We believe this trend is, in</p> <p>3 part, due to the increase of nontraditional mortgage</p> <p>4 loans, such as interest-only mortgages, as well as</p> <p>5 increase in total loan-to-value or LTV ratios for</p> <p>6 mortgage loans originated during these years."</p> <p>7 Did I read that correctly?</p> <p>8 A. Yes.</p> <p>9 Q. Did you consider this as linking the</p> <p>10 negative news announced on that day to OFHEO's</p> <p>11 allegations relating to exposure to subprime and</p> <p>12 nontraditional loans?</p> <p>13 A. I see no link between the statement and</p> <p>14 OFHEO's allegations in this case, and I'm happy to</p> <p>15 explain.</p> <p>16 Q. All right. Go ahead.</p> <p>17 A. Okay. So look at the sentences that --</p> <p>18 Q. Sorry. Go ahead.</p> <p>19 A. Look at the first sentence in this</p> <p>20 paragraph. "For nine months ended September 30th,</p> <p>21 2007, our single-family, credit guaranty portfolio</p> <p>22 continued to experience increase in the rate at which</p> | <p style="text-align: right;">Page 159</p> <p>1 remember about 2005, but 2006 and 2007 vintages --</p> <p>2 showing that those vintages riskier.</p> <p>3 So there is no wrongful disclosure that</p> <p>4 is cured by this statement, which appears to be</p> <p>5 truthful or consistent with the data and the facts as</p> <p>6 known to the market.</p> <p>7 Third sentence: "We believe this trend</p> <p>8 is, in part, due to increase of nontraditional</p> <p>9 mortgage loans, such as interest-only mortgages, as</p> <p>10 well as increase in loan-to-value ratios for mortgage</p> <p>11 loans originated during these years."</p> <p>12 They disclosed their increasing</p> <p>13 participation in interest-only mortgages. If I</p> <p>14 recall correctly, they went from being 2 percent of</p> <p>15 Freddie Mac's guaranteed portfolio to 9 percent of</p> <p>16 Freddie Mac's guaranteed portfolio by September 30th,</p> <p>17 and they reported all the increases in between</p> <p>18 leading up to September 2007.</p> <p>19 They did talk about, in various</p> <p>20 speeches, in various earnings calls, that</p> <p>21 loan-to-value ratios for more recent vintages were</p> <p>22 higher, that recent vintages had more so-called</p> |
| <p style="text-align: right;">Page 158</p> <p>1 loans transition from delinquency to foreclosure."</p> <p>2 They had been saying in the speeches</p> <p>3 leading up to September 30th, in earnings calls</p> <p>4 leading up to September 30th, there were market</p> <p>5 reported statistics that, even without any Freddie</p> <p>6 Mac statements, indicated that for loans -- that</p> <p>7 there was an increase in the rate at which loans</p> <p>8 transitioned from delinquency to foreclosure.</p> <p>9 There is nothing in this statement that</p> <p>10 is inconsistent with their prior disclosures, with</p> <p>11 the market knowledge, et cetera.</p> <p>12 Second sentence: "The increase in these</p> <p>13 delinquency transition rates, compared to historical</p> <p>14 experience, has been progressively worse for mortgage</p> <p>15 loans originated in 2005 through 2007."</p> <p>16 Again, they have been telling people</p> <p>17 that recent vintages were more risky. The market</p> <p>18 knew recent vintages were more risky. Analysts</p> <p>19 understood it and wrote on the fact that recent</p> <p>20 vintages were more risky. And Freddie Mac, in its</p> <p>21 prior disclosures, was breaking out in 2006 and</p> <p>22 2005 -- and I don't remember whether even -- I don't</p> | <p style="text-align: right;">Page 160</p> <p>1 nontraditional mortgage loans.</p> <p>2 So there is no previously hidden truth</p> <p>3 that is being revealed by this sentence.</p> <p>4 Q. Let me stop you there, Doctor. So what</p> <p>5 you're saying here is not that there's not</p> <p>6 necessarily a link to plaintiff's allegations, but to</p> <p>7 the extent there is any link, this has been</p> <p>8 previously disclosed. This is not undisclosed</p> <p>9 material risk. It's a previously disclosed material</p> <p>10 risk, correct?</p> <p>11 A. Correct.</p> <p>12 Q. All right. Apart from the analyst</p> <p>13 reports, Appendix 2 has a list of news articles, and</p> <p>14 I assume you read all those news articles, I believe</p> <p>15 you indicated earlier?</p> <p>16 A. Yes.</p> <p>17 Q. How were those news articles chosen?</p> <p>18 A. So, Counsel, as I sit here right now, I</p> <p>19 can give you my best answer, and I will correct it in</p> <p>20 the transcript if my memory is not precise enough.</p> <p>21 Q. All right.</p> <p>22 A. My understanding is that we picked news</p> |

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| <p style="text-align: right;">Page 161</p> <p>1 articles that pertain to the topics we were 2 discussing that seem to be non-duplicative. 3 Sometimes you will have ten risk articles, each one 4 of them saying the very same thing. Or sometimes 5 there will be four versions of, say, a Bloomberg news 6 article that will be time-stamped revised then, 7 revised at this time stamp, revised at that time 8 stamp. 9 So to the best of my recollection, we 10 avoided dumping into the record articles that did not 11 incrementally provide new information, and we tried 12 to be comprehensive in covering articles that talked 13 about the topics that were being discussed in the 14 report, and they were cited throughout the report. 15 MR. MARKOVITS: Goldy, if you can hand 16 out the fifth tab -- the document at the fifth 17 tab. And I think it's going to be Exhibit 453. 18 [Exhibit 453, New York Times article 19 titled "Loan Crisis Entangles Freddie Mac," was 20 marked for identification.] 21 BY MR. MARKOVITS: 22 Q. Doctor, you have Exhibit 453 in front of</p> | <p style="text-align: right;">Page 163</p> <p>1 A. Every paragraph in this article is 2 duplicative of what Freddie Mac announced the 3 previous day, or known facts. There is no 4 information content in this article. 5 Q. Where it says in the fifth paragraph: 6 Quote, "But yesterday's earnings report showed that 7 even the gold standard of lending agencies was not 8 immune to the toxic subprime securities that have 9 infected much of the market," end quote. 10 Do you see that? 11 A. Yes, I do. 12 Q. Would you agree that that discussion of 13 subprime relates to OFHEO's allegations regarding 14 subprime and nontraditional loans? 15 A. Again, you continue to pose questions 16 using the words "relate to," which I don't know if 17 you mean to be deliberately that imprecise, or we can 18 just stipulate to the fact that when you use the 19 words "relate to," it does not mean it actually 20 revealed anything economically significant and 21 previously unknown pertaining to OFHEO's allegations, 22 because that was the filter that I would use as a</p> |
| <p style="text-align: right;">Page 162</p> <p>1 you? 2 A. Yes, I do. 3 Q. Do you see it's a New York Times article 4 titled "Loan Crisis Entangles Freddie Mac"? 5 A. Yes. 6 Q. And do you see in the third paragraph, 7 it says: 8 "The company has been battered by a 9 rising wave of foreclosures tied to subprime mortgage 10 defaults, and it is, quote, seriously considering, 11 unquote, cutting its stock dividend"? 12 A. Yes. 13 Q. And this is dated November 21st, 2007? 14 A. So it says, yes. 15 Q. Do you know why this article wasn't 16 included in the list of the news articles you 17 reviewed? 18 A. Give me a minute or two to review this. 19 I reviewed it now, and I'm happy to 20 answer your questions. 21 Q. Do you know why this article is not 22 included in your list of news articles you reviewed?</p> | <p style="text-align: right;">Page 164</p> <p>1 financial economist. 2 Q. Would you agree that this appears to 3 indicate -- at least as with regard to Mr. Greenbaum 4 of the New York Times -- a view that the 5 November 20th, 2007 earnings report of Freddie Mac 6 showed that the loss was, in his view, due to the, 7 quote, "toxic subprime securities that have infected 8 much of the market," end quote? 9 A. No, it does not. Let's go back to what 10 we were looking at in Exhibit 60. I think you would 11 remember the language we discussed under market 12 overview, where Freddie Mac is discussing how trends 13 in the residential market that were particularly 14 acute for subprime market, that precipitated the 15 liquidity crisis, that resulted in widening of OAS 16 spreads, that resulted in Freddie taking increasing 17 losses, none of that has necessarily anything to do 18 with OFHEO's allegations in the complaint. 19 This is a journalist writing in layman's 20 terms what Freddie Mac announced the previous day. 21 This is not anything new, not anything economically 22 significant, and not a revelation that confirms</p> |

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| <p style="text-align: right;">Page 165</p> <p>1 OFHEO's allegations in this case.</p> <p>2 Q. Isn't this a journalist who is analyzing</p> <p>3 Freddie Mac, presenting a view to the market that the</p> <p>4 toxic subprime securities were a significant reason</p> <p>5 for the losses that were announced in the earnings</p> <p>6 report on November 20th?</p> <p>7 A. It doesn't say that at all. When you</p> <p>8 look at the paragraph that you're asking me to agree</p> <p>9 with you on, it says:</p> <p>10 "But yesterday's earnings report showed</p> <p>11 that even the gold standard of lending agencies was</p> <p>12 not immune to the toxic subprime securities that have</p> <p>13 infected much of the market."</p> <p>14 So causation chain here is, subprime</p> <p>15 market, tightening liquidity, particularly starting</p> <p>16 August 9th, raising TED spread, raising OAS spread,</p> <p>17 creating declining marks on ABX. And all of that,</p> <p>18 even due to worsening economy, increasing delinquency</p> <p>19 rates on prime loans -- all of those affected Freddie</p> <p>20 Mac.</p> <p>21 This paragraph does not say that</p> <p>22 Freddie Mac was hiding chock-full of subprime loans</p> | <p style="text-align: right;">Page 167</p> <p>1 And not that I know it matters, but I just wanted to</p> <p>2 be clear.</p> <p>3 Q. Is this one of the articles that you</p> <p>4 have listed in your report?</p> <p>5 A. I'd have to check.</p> <p>6 Q. Assuming it's not, do you have any</p> <p>7 reason for why it would not be?</p> <p>8 A. I didn't see anything in this article</p> <p>9 that talks about any inadequate disclosures by</p> <p>10 Freddie Mac. It's talking about the same thing</p> <p>11 Freddie Mac was talking about in the information</p> <p>12 supplement, namely borrowers were defaulting on</p> <p>13 loans.</p> <p>14 Q. Wait a second, Doctor. You say you</p> <p>15 didn't see anything in here that talks about</p> <p>16 inadequate disclosures.</p> <p>17 Are you saying in the other 317 you cite</p> <p>18 or whatever, there were discussions of inadequate</p> <p>19 disclosures?</p> <p>20 A. No, I'm not saying that at all. What I</p> <p>21 said is --</p> <p>22 Q. Okay. So let me ask you this question,</p> |
| <p style="text-align: right;">Page 166</p> <p>1 from the investing public and the market learned</p> <p>2 about them yesterday.</p> <p>3 Q. All right.</p> <p>4 MR. MARKOVITS: Goldy, could you hand</p> <p>5 out Tab 4, and we'll mark it as Exhibit 454.</p> <p>6 [Exhibit 454, New York Times article</p> <p>7 titled "Floyd Norris, From Virtuous Circle to</p> <p>8 Vicious Credit Cycle," was marked for</p> <p>9 identification.]</p> <p>10 BY MR. MARKOVITS:</p> <p>11 Q. Dr. Bajaj, do you have Exhibit 454?</p> <p>12 A. Yes, I do. I'd like a minute to review</p> <p>13 it, please.</p> <p>14 Q. Sure.</p> <p>15 A. Okay. I read the article.</p> <p>16 Q. Exhibit 454 is a New York Times article</p> <p>17 dated November 22nd, 2007. Title was, "Floyd Norris,</p> <p>18 From Virtuous Circle to Vicious Credit Cycle."</p> <p>19 A. Actually, so the record is clear, it</p> <p>20 says at the end: "A version of this article appears</p> <p>21 in print in the International Herald Tribune." I</p> <p>22 don't know if it appeared before then or after then.</p> | <p style="text-align: right;">Page 168</p> <p>1 Doctor. If you go down to the fifth paragraph, there</p> <p>2 is a quote:</p> <p>3 Quote, "The underwriting standards</p> <p>4 declined," end quote, "said Anthony Pizsel, chief</p> <p>5 financial officer of Freddie Mac," quote, "that was</p> <p>6 across the board," end quote.</p> <p>7 Do you see that?</p> <p>8 A. Yes, I do.</p> <p>9 Q. Would you agree that a decline in</p> <p>10 underwriting standards provides support for</p> <p>11 plaintiff's allegation that OPERS misrepresented its</p> <p>12 adherence to its underwriting standards?</p> <p>13 A. Not at all. When you look at the</p> <p>14 sentence that you read, the sentence says: "The</p> <p>15 underwriting standards declined," that was across the</p> <p>16 board. It appears to me, Mr. Pizsel is talking about</p> <p>17 the vicious cycle that industrywide underwriting</p> <p>18 standards declined.</p> <p>19 That when industrywide underwriting</p> <p>20 standards decline, most acutely in the subprime</p> <p>21 space, that created the credit crisis that tightened</p> <p>22 the spread that led to, in part, the losses.</p> |

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| <p style="text-align: right;">Page 169</p> <p>1 And what you ignore is the second and 2 third paragraph in this article, which says, how many 3 of these loans, namely loans held by Freddie Mac, 4 were subprime? It says none, but that does not make 5 losses any less real. 6 So a balanced reading of this article 7 tells me there is nothing significant or new in this 8 article. It is repeating what Freddie Mac announced 9 on November 20th, and it is not related to OFHEO's 10 allegations that Freddie actually hid a chock-full of 11 subprime loans or that it misrepresented its capital 12 or any of the other items in the list that we read 13 this morning about Freddie Mac's -- OFHEO's 14 allegations. 15 Q. You don't read this article as 16 indicating that Freddie Mac's underwriting standards 17 declined? 18 A. That's not what it says here. 19 Q. Let's turn to the second page of the 20 article. Look at the third paragraph up, where it 21 says: 22 "A kinder way to look at it is that</p> | <p style="text-align: right;">Page 171</p> <p>1 market. It supported the market. And if the market 2 as a whole was going into a difficult period due to 3 excesses in the subprime corners of the market and 4 declining home prices, of course, Freddie Mac was not 5 immune to it, and Freddie Mac discussed it. 6 Q. Well, that's one point of view. 7 Your report discusses at various points 8 what you describe as turmoil in the mortgage and 9 financial markets, particularly after August 2007, 10 correct? 11 A. Yes. 12 Q. In your view, did that turmoil benefit 13 Freddie Mac compared to its non-GSE competitors? 14 MR. BLOCK: Objection to form. 15 THE WITNESS: In the long run, it did. 16 But in the short run, it created a lot of 17 headwinds. The fact that Freddie Mac had to eat 18 up its regulatory capital, building its 19 reserves, recognizing market to market losses, 20 marking down values of illiquid securities where 21 Freddie Mac always followed marks obtained from 22 the market, even if they were artificially</p> |
| <p style="text-align: right;">Page 170</p> <p>1 competition forced the company to lower its 2 standards. Either way, Freddie, this week, released 3 data showing how its standards eroded." 4 Would you say the statement, "Freddie, 5 this week, released data showing how its standards 6 eroded" relates to decline of its underwriting 7 standards? 8 A. I believe this paragraph is talking 9 about the fact that, given where the market was 10 going, Freddie was investing ever larger amounts in 11 interest-only loans or other alternative mortgage 12 products, which had timely disclosed. And whether 13 you want to characterize as that forced the company 14 to lower its standards, or Freddie was meeting the 15 market. 16 And when it says: "Freddie, this week, 17 released data showing that its standards eroded," 18 it's referring to data that Freddie released, which 19 had been releasing, which showed increased 20 delinquency rates, which showed worsening loan 21 quality industrywide. 22 Freddie Mac had a mission to support the</p> | <p style="text-align: right;">Page 172</p> <p>1 depressed in that illiquid market environment, 2 those factors, of course, adversely affected 3 Freddie Mac. 4 But because a lot of Freddie Mac's 5 competitors that were doing private-label 6 securitizations were falling by the wayside, 7 that created opportunities for Freddie Mac to 8 increase its market share which it did. 9 One implication of the credit turmoil 10 was widening of the OAS spreads. Widening of 11 OAS spreads works in two ways. In the short 12 run, it forces Freddie Mac to take on accounting 13 losses in its marked to market calculations, but 14 OAS spread is also a measure of how much lower 15 interest rate investors are willing to buy 16 Freddie Mac's securities at relative to a 17 benchmark of LIBOR, and as that spread gets 18 larger, that allows Freddie Mac to make more 19 money on its business going forward. 20 So credit turmoil hurt Freddie Mac in 21 the short run, but as -- 22</p> |

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| <p style="text-align: right;">Page 173</p> <p>1 BY MR. MARKOVITS:</p> <p>2 Q. What is the short run, Doctor?</p> <p>3 A. Meaning the losses it had to recognize</p> <p>4 in the third quarter. But as the market analysts,</p> <p>5 including Mr. Shapiro, recognized, it also created</p> <p>6 opportunities for Freddie Mac to use its market power</p> <p>7 and increase market share, to increase its GTs,</p> <p>8 guarantee fees, to increase its margins. And that</p> <p>9 means with less competition and higher margins,</p> <p>10 Freddie Mac would benefit -- was expected to benefit</p> <p>11 in the long run.</p> <p>12 Q. But between August of 2007 and</p> <p>13 November 20th of 2007, did the turmoil benefit</p> <p>14 Freddie Mac compared to its non-GSE competitors?</p> <p>15 A. Well, given the sorry state of non-GSE</p> <p>16 competitors, I would say yes, it did. Because</p> <p>17 Freddie Mac -- you see, Freddie Mac buys loans at</p> <p>18 prices it has to pay given competition in the market,</p> <p>19 and that's certainly true in realtime on bulk</p> <p>20 business. That's what's called spot pricing of risk.</p> <p>21 If there are less -- fewer people</p> <p>22 bidding on loans and they are sharing their bids,</p> | <p style="text-align: right;">Page 175</p> <p>1 and had to offer aggressive bids.</p> <p>2 If this is a good time, maybe we can</p> <p>3 take a little break. Or if you have another question</p> <p>4 or two, I'm happy to break then.</p> <p>5 Q. Just another question or two.</p> <p>6 A. Okay.</p> <p>7 Q. Did the turmoil after August 2007,</p> <p>8 before November 20th, 2007, cause greater risk for</p> <p>9 Freddie Mac compared to its non-GSE competitors?</p> <p>10 A. I'm sorry. I told you I'm good to go</p> <p>11 for a question or two, but I did have difficulty</p> <p>12 focusing on your question, so I'm going to ask you to</p> <p>13 repeat it, please.</p> <p>14 Q. Did the turmoil that occurred between</p> <p>15 August 2007 and November 20th, 2007 cause greater</p> <p>16 risk for Freddie Mac compared to its non-GSE</p> <p>17 competitors?</p> <p>18 A. The answer is yes and no. To the extent</p> <p>19 it caused Freddie Mac to recognize losses, to not be</p> <p>20 able to have sufficient surplus capital, to the</p> <p>21 extent it led to increased credit charge to all kinds</p> <p>22 of loans, including prime loans, those factors hurt</p> |
| <p style="text-align: right;">Page 174</p> <p>1 they are bidding lower amounts on loans. And that</p> <p>2 allows GSE to buy those loans cheaper, other things</p> <p>3 being equal. And in that sense --</p> <p>4 Q. Do you know whether that was the case</p> <p>5 with regard to Freddie from August of 2007 through</p> <p>6 November 20th, 2007? Were they able to buy loans</p> <p>7 cheaper?</p> <p>8 A. Why would that not be the case?</p> <p>9 Q. I'm asking you -- I'm not asking whether</p> <p>10 it would or wouldn't be the case. I'm asking: Do</p> <p>11 you know whether or not that was the case?</p> <p>12 Have you done any factual inquiry, not</p> <p>13 just assuming or guessing, but do you know one way or</p> <p>14 another whether, during that period of time, Freddie</p> <p>15 Mac was able to buy loans more cheaply?</p> <p>16 A. I didn't assume or guess. I read the</p> <p>17 market commentary, including from your expert that so</p> <p>18 indicated. Now, I didn't do a forensic exercise of</p> <p>19 looking at loans Freddie Mac per shares in the</p> <p>20 marketplace during that few-months period and</p> <p>21 compared their margins to what it was purchasing when</p> <p>22 Freddie Mac was under a lot of competitive pressure</p> | <p style="text-align: right;">Page 176</p> <p>1 Freddie Mac or GSEs more generally. I can't speak to</p> <p>2 whether they hurt GSEs more than its competitors.</p> <p>3 But in the long run, that turmoil also</p> <p>4 created opportunities for Freddie Mac and GSEs,</p> <p>5 generally, to increase their market share, to</p> <p>6 increase their margins, even though that happens with</p> <p>7 a little bit of a lag, to benefit from that turmoil,</p> <p>8 and the disappearance of competition from the</p> <p>9 marketplace.</p> <p>10 Of course, as things progressed in 2008,</p> <p>11 what appeared to be the worst crisis in a generation</p> <p>12 until then, it got even worse. And, you know, that,</p> <p>13 of course, affected everybody, including GSEs.</p> <p>14 And the market always knew that Freddie</p> <p>15 Mac had a highly leveraged business model on 30 to</p> <p>16 \$40 billion of capital. It had a \$2 trillion balance</p> <p>17 sheet. So it was not a secret to the market that</p> <p>18 Freddie Mac's business model was predicated on 50- to</p> <p>19 70-X leverage ratio.</p> <p>20 And if we get into a really severe</p> <p>21 credit crisis, that would, of course, have an impact</p> <p>22 on Freddie Mac. And it was not a diversified</p> |

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| <p style="text-align: right;">Page 177</p> <p>1 company. It was only in one line of business, that</p> <p>2 is buying and guaranteeing loans and investing in</p> <p>3 loans, as compared to some other financial companies</p> <p>4 that had other lines of business as a</p> <p>5 diversification.</p> <p>6 MR. MARKOVITS: I think that's a good</p> <p>7 breakpoint. See you back in five, ten minutes.</p> <p>8 (Brief recess.)</p> <p>9 MR. MARKOVITS: Back on the record.</p> <p>10 BY MR. MARKOVITS:</p> <p>11 Q. Dr. Bajaj, turning to a different topic,</p> <p>12 a topic I think you want to get to and one I've heard</p> <p>13 earlier today, which is this stock rebound issue.</p> <p>14 You agree that Freddie Mac's stock</p> <p>15 dropped on November 20th, 2007, correct?</p> <p>16 A. Yes.</p> <p>17 Q. Do you agree that was a statistically</p> <p>18 significant stock drop, correct?</p> <p>19 A. Yes.</p> <p>20 Q. Can you give a brief definition of what</p> <p>21 statistical significance is?</p> <p>22 A. So I'll use an analogy. Let's say you</p> | <p style="text-align: right;">Page 179</p> <p>1 the definition of statistical significance is? Is it</p> <p>2 some variation from the normal; is that correct?</p> <p>3 A. Yeah. The common standard -- and I</p> <p>4 should have completed my answer. The common standard</p> <p>5 statistician's use is if something is big enough to</p> <p>6 occur without a specific reason less than 5 percent</p> <p>7 of the time, then it is deemed to be statistically</p> <p>8 significant.</p> <p>9 Q. Okay. So the particular cutoff that's</p> <p>10 generally used for statistical significant is less</p> <p>11 than 5 percent is not statistically significant?</p> <p>12 A. The cutoff is 5 percent. If the</p> <p>13 magnitude is so large that it would be expected to</p> <p>14 occur by chance alone less than 5 percent of the</p> <p>15 time, then it is deemed to be statistically</p> <p>16 significant.</p> <p>17 Q. Got it. Okay.</p> <p>18 Can you go to your report,</p> <p>19 paragraph 188?</p> <p>20 MR. BLOCK: Page 93.</p> <p>21 BY MR. MARKOVITS:</p> <p>22 Q. I'd like to ask you about the sentence</p> |
| <p style="text-align: right;">Page 178</p> <p>1 look at a wave and you say, "Wow, that was a big</p> <p>2 wave." Well, it depends on the context. If you are</p> <p>3 in the middle of a stormy ocean, a ten-foot-high wave</p> <p>4 may not be particularly big. Whereas, if you're</p> <p>5 looking at a placid lake, a ten-foot wave may be</p> <p>6 really big.</p> <p>7 So the concept of statistical</p> <p>8 significance in this context is something of large</p> <p>9 enough a magnitude that normal day-to-day variation,</p> <p>10 without any specific reason, could not explain or</p> <p>11 this would stand out. So the concept of statistical</p> <p>12 significance for November 29th [sic] price drop is</p> <p>13 not that I did any --</p> <p>14 Q. November 20th?</p> <p>15 A. November 20th, is not that I offered an</p> <p>16 event theory of that price drop, when I agreed with</p> <p>17 your previous expert, Mr. Feinstein, that the price</p> <p>18 drop was large enough, that it was likely</p> <p>19 statistically significant. So it's not surprising to</p> <p>20 me that if you do a market model, yes, it would be</p> <p>21 statistically significant.</p> <p>22 Q. I'm sorry. Could you repeat again what</p> | <p style="text-align: right;">Page 180</p> <p>1 that start on the second line from the bottom that</p> <p>2 reads:</p> <p>3 "The 25 percent price decline that</p> <p>4 Fannie Mae experienced on the day that Freddie Mac</p> <p>5 made the turning announcement demonstrates that most</p> <p>6 of the price drop in Freddie Mac's stock price on</p> <p>7 November 20th was unrelated to anything specific to</p> <p>8 Freddie Mac that did not equally apply to Fannie</p> <p>9 Mae," end quote.</p> <p>10 Do you see that?</p> <p>11 A. Yes, I do.</p> <p>12 Q. Are you saying that the Freddie Mac</p> <p>13 price drop was not company specific?</p> <p>14 A. Well, if Fannie Mae is the company most</p> <p>15 similar to Freddie Mac, and the issue that was top of</p> <p>16 mind for market on that day of November 20th was</p> <p>17 whether these GSEs were trying, perhaps, to take</p> <p>18 advantage of this market turmoil in the long run,</p> <p>19 will or will not be able to raise capital at a</p> <p>20 reasonable cost to take advantage of that, those</p> <p>21 concerns also apply to Fannie Mae.</p> <p>22 And the fact that, on November 20th,</p> |

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| <p style="text-align: right;">Page 181</p> <p>1 when Fannie Mae did not announce anything of any 2 import or anything at all, its stock also declined by 3 25 percent. Coupled with the fact, as I say 4 elsewhere in my report, that when Freddie Mac's stock 5 price rebounded on its capital raise days, Fannie 6 Mae's stock price also rebounded.</p> <p>7 Those two observations combined lead to 8 the only possible economic interpretation: That the 9 price drop on November 20th, which recovered seven 10 trading days later, had to do with market's fears 11 that Freddie Mac will lose access to capital markets. 12 And that's why, when Freddie Mac's stock price 13 declined, so did Fannie Mae's. And when Freddie Mac 14 was successfully able to raise capital, Fannie Mae's 15 stock price also rebounded.</p> <p>16 These capital raise events did not 17 cancel out what OPERS alleges were revelations that 18 lowered the value of Freddie Mac as an economic 19 enterprise. If there were bad loans that the market 20 learned about those days, and those loans were going 21 to lead to losses, and that was the prime determinant 22 of stock price drop on November 20th, or even if</p> | <p style="text-align: right;">Page 183</p> <p>1 specific. And market's concern about whether or not 2 this model would be economically viable on a 3 go-forward basis, having nothing to do with any 4 diminution in value on November 20th, that could be 5 disclosed -- that could be attributed to either 6 manifestations of previously disclosed risks, which 7 there could be many, or, as OPERS alleges, 8 realization of previously undisclosed risks.</p> <p>9 The fact that the price drop disappears 10 says there is nothing to explain. We don't need to 11 have a debate over how much of the price drop was 12 related to previously disclosed risks being realized 13 and how much of it was due to previously undisclosed 14 risks being realized, because there's nothing to 15 explain.</p> <p>16 Q. Okay. So you're saying -- are you 17 saying that most of the price drop on November 20th, 18 2007 was common to both Freddie Mac and Fannie Mae?</p> <p>19 A. I'm saying that, but I'm saying more. 20 I'm saying not a lot of the price drop was common, 21 which your expert might say, "Aha, market learned 22 that Freddie Mac had chock-full of bad loans hidden</p> |
| <p style="text-align: right;">Page 182</p> <p>1 there were significant -- there were significant 2 disappointment about risks that were previously 3 disclosed but were manifested on that day, the effect 4 of those risks doesn't cancel out simply because 5 Freddie Mac raises capital.</p> <p>6 If that effect had been an economically 7 significant part of the November 20th stock price 8 decline, why would that decline just disappear when 9 Freddie Mac, seven trading days later, raised 10 capital? And why would Fannie Mae have parallel 11 stock price changes?</p> <p>12 So that's the significance of looking at 13 what happened to Freddie Mac and Fannie Mae on 14 November 20th and the capital raise dates that I 15 analyze in my report.</p> <p>16 Q. Okay. But my question was simply -- yes 17 or no -- are you saying that Freddie Mac's price drop 18 on November 20th, 2007 was not company specific?</p> <p>19 A. So it pertained to Freddie Mac, and of 20 course, it was, in that sense, company specific. But 21 it also affected Fannie Mae. In that sense, it was 22 not company specific, but GSE-business-model</p> | <p style="text-align: right;">Page 184</p> <p>1 in the drawers, and the market also bid down the 2 value of Fannie Mae because it suspected maybe Fannie 3 Mae does, too."</p> <p>4 But what logical explanation would there 5 be other than what explanation I have offered? For 6 not only Freddie Mac's stock price to recover, 7 meaning there's nothing left to explain for Freddie 8 Mac, but Fannie Mae's stock price recovering, too.</p> <p>9 I think that proves -- and I don't mean 10 it in legal sense, but in an economic sense -- 11 without a doubt, that no economically significant 12 part of the price drop on November 20th that OPERS 13 alleges caused its losses could be attributed to 14 either materialization of previously undisclosed 15 risks, or for that matter, materialization of 16 previously disclosed risks either.</p> <p>17 Q. Can you turn to note 272 of your report, 18 which I believe is on the next page?</p> <p>19 It begins with: 20 "I did not find any Fannie Mae specific 21 news that can explain Fannie Mae's stock price drop." 22 Do you see that?</p> |

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| <p style="text-align: right;">Page 185</p> <p>1 A. Yes.</p> <p>2 Q. So what news explained, in your view,</p> <p>3 Fannie Mae's stock price drop on November 20th, 2007?</p> <p>4 A. As I just explained, the fact that</p> <p>5 Fannie Mae's stock price dropped, and then when</p> <p>6 Freddie Mac's stock price recovered on capital raise</p> <p>7 date, so did Fannie Mae's, leads to only one logical</p> <p>8 conclusion: That Fannie Mae's stock price drop was</p> <p>9 due to the same nervousness in the marketplace that</p> <p>10 was not specific to Freddie Mac alone.</p> <p>11 That whether or not GSEs' business model</p> <p>12 would be viable because capital markets would be</p> <p>13 willing to finance GSEs so they could ride out the</p> <p>14 storm and they could take advantage of their</p> <p>15 strengthened relative competitive position.</p> <p>16 Q. What specific announcement was made and</p> <p>17 by whom that led the market to question is Fannie</p> <p>18 Mae's ability to meet its regulatory capital</p> <p>19 requirements?</p> <p>20 A. I did not study in detail every</p> <p>21 announcement by Fannie Mae. I looked at</p> <p>22 November 20th, when, as I said, in footnote 272, the</p> | <p style="text-align: right;">Page 187</p> <p>1 level.</p> <p>2 So when you look at all this evidence,</p> <p>3 the only logical explanation I can think of is the</p> <p>4 one I have offered.</p> <p>5 Q. Can you turn to your Appendix 4,</p> <p>6 Table A1. It's on the top, I think, of page 5 of 5.</p> <p>7 Let me know when you're there.</p> <p>8 A. Appendix 4, market model description?</p> <p>9 MR. BLOCK: Table A1, right?</p> <p>10 MR. MARKOVITS: Yes.</p> <p>11 THE WITNESS: I'm on that page.</p> <p>12 BY MR. MARKOVITS:</p> <p>13 Q. Okay. Does Panel A at the top show that</p> <p>14 the total drop in Freddie Mac's stock price on</p> <p>15 November 20th, 2007 is 33.82 percent?</p> <p>16 A. Well, that is actually return of</p> <p>17 logarithm of stock price. Because, from a technical</p> <p>18 perspective, when you run market models, because</p> <p>19 stock return distributions are set to be log normal,</p> <p>20 meaning the log of returns is set to be normal, and</p> <p>21 regression analyses are predicated on underlying</p> <p>22 return distribution being normal, what you see there</p> |
| <p style="text-align: right;">Page 186</p> <p>1 only thing I could find was Mr. Shapiro downgrading</p> <p>2 both Freddie Mac and Fannie Mae.</p> <p>3 And with all due respect, I don't think</p> <p>4 his downgrade would lead to a 25 percent drop in</p> <p>5 Fannie Mae's stock price or a 29 percent drop in</p> <p>6 Freddie Mac's stock price. And he explained his</p> <p>7 reasons for those downgrades, and all of them had to</p> <p>8 do with well-known issues, having no relationship to</p> <p>9 alleged disclosure deficiencies.</p> <p>10 But the fact that not only both the</p> <p>11 stock price -- both companies' stock price dropped on</p> <p>12 November 20th, both companies' stock price also</p> <p>13 recovered analogously on Freddie Mac's capital raise</p> <p>14 date.</p> <p>15 I also present evidence in my report</p> <p>16 that when you look at OAS spreads, once the capital</p> <p>17 raise was completed, those OAS spreads reverted to</p> <p>18 where they were prior to November 20th.</p> <p>19 I also show evidence that implied</p> <p>20 volatility on Freddie Mac and Fannie Mae's stock that</p> <p>21 had spiked leading into November 20th -- or on</p> <p>22 November 20th, also returned to its pre-November 20th</p> | <p style="text-align: right;">Page 188</p> <p>1 is Freddie Mac's log return of 33.82. And that's why</p> <p>2 it's not the 29 percent number that we've been</p> <p>3 talking about when we look at just the stock price</p> <p>4 drop. That's just a technicality.</p> <p>5 Q. Sure. And does that Panel A also show a</p> <p>6 company specific excess log return for Freddie Mac of</p> <p>7 negative 18.24 percent?</p> <p>8 A. Yes.</p> <p>9 Q. And that's statistically significant at</p> <p>10 the 5 percent level?</p> <p>11 A. Correct.</p> <p>12 Q. That controls for -- you did a market</p> <p>13 control, it looks like, down below?</p> <p>14 A. Yes.</p> <p>15 Q. And that controls for Fannie Mae's stock</p> <p>16 price movements, correct?</p> <p>17 A. Well, not in that way. Because the way</p> <p>18 a regression model works is on a particular day, you</p> <p>19 look at the average relationship between return on a</p> <p>20 stock and its industry component, and, therefore,</p> <p>21 even though Fannie Mae returns are part of the</p> <p>22 explanatory factor, it would be an incorrect</p> |

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| <p style="text-align: right;">Page 189</p> <p>1 interpretation to say that Freddie Mac's stock price 2 dropped by 18 percent over and above Fannie Mae's 3 stock price drop, as we discussed before. Freddie 4 Mac's stock price drop was 29 percent, and Fannie 5 Mae's stock price drop was 25 percent on 6 November 20th. So I think you can't overinterpret 7 regression results in that manner. 8 Q. But you'd agree that the company 9 specific drop for Freddie Mac in terms of the excess 10 live return is negative 18.24 percent? 11 A. In the technical sense, the way I 12 described and caveated, yes. 13 Q. All right. And then that's more than 14 half of the entire drop that occurred on that day, 15 correct? 16 A. Well, again, you're comparing apples to 17 -- no, I take that back. 18 Are you saying 18 percent is more than 19 half of 33.8 percent? If so, yes, your arithmetic is 20 correct. 21 Q. Yes, that's what I was saying. I'm glad 22 I didn't get that wrong.</p> | <p style="text-align: right;">Page 191</p> <p>1 regulatory capital; is that correct? 2 A. No. I describe over several paragraphs 3 in my report what the market was learning about 4 Freddie Mac's attempts to raise capital. 5 Initially, Mr. Shapiro and several 6 others feared on November 20th that new capital raise 7 was going to be very dilutive. I think he said in 8 one of his analyst reports, he expected 20 percent 9 dilution. 10 And then as Freddie approached the 11 market, over the three dates, 27th, 28th, and 30th, 12 the market learned that there was strong appetite for 13 Freddie Mac's preferred offering, that Freddie Mac 14 could issue straight preferred stock without offering 15 any convertible offer stock which could be dilutive 16 if it were there. 17 And the preferred stock dividend, given 18 strong demand for that issue, ultimately ended up at 19 8.375 percent, which was lower than what the market 20 had feared. 21 So I do want to note here that while 22 we're talking about event studies and interpreting</p> |
| <p style="text-align: right;">Page 190</p> <p>1 On your Panel A chart, you also include 2 three other dates in addition to November 20th, 2007, 3 and those are the 27th, 28th, and 30th, correct? 4 A. Yes. 5 Q. And the inclusion of those dates in that 6 chart is based on your opinion that the rebound of 7 the stock price through November 30th should be 8 considered, right? 9 A. Well, I chose those dates specifically 10 because, as I described in my report, on those dates, 11 there was economically significant information about 12 Freddie Mac's capital raise attempts. So, 13 collectively, those dates represent the rebound in 14 Freddie Mac's stock. 15 And if you look at all four days put 16 together, regardless of your previous question about 17 November 20th, over all those four days, the 18 statistical measure of excess log returns for Freddie 19 Mac was statistically insignificant when you combine 20 those four days. 21 Q. And you said you used those additional 22 three days because there was information regarding</p> | <p style="text-align: right;">Page 192</p> <p>1 each day's excess returns over those four dates, I am 2 not saying that Freddie Mac's stock traded in an 3 efficient market and, hence, this event study can be 4 taken as what you would observe necessarily in an 5 informationally efficient market. 6 Either the stock was trading efficiently 7 or it was not. If it was trading efficiently, then 8 it's clear that once you look at the capital raise 9 dates combined with November 20th, there is nothing 10 left to explain. 11 And if the stock was -- may I finish my 12 thought, please? 13 If the stock was not trading in an 14 efficient market, then it appears that November 20th 15 market price drop was an overreaction, which many 16 analysts said was probably the case. Thank you. 17 Q. Doctor, could you please, please, 18 please, limit your answers to my questions? That 19 answer when well, well beyond my question. Please 20 try to limit your answers to my questions. 21 A. Okay. 22 Q. Did you consider any of the other dates,</p> |

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| <p style="text-align: right;">Page 193</p> <p>1 the 21st, 22nd, 23rd, 24th, 25th, 26th, 29th, or are</p> <p>2 you saying that there was no news regarding that</p> <p>3 capital raise position of Freddie Mac during those</p> <p>4 days?</p> <p>5 A. There was no economically significant</p> <p>6 news on the dates that I did not include in my</p> <p>7 regression analysis.</p> <p>8 Q. And you included November 27th, correct?</p> <p>9 A. Yes.</p> <p>10 Q. The P value on that day is 0.051?</p> <p>11 A. Yes.</p> <p>12 Q. That is not statistically significant at</p> <p>13 the 5 percent level, correct?</p> <p>14 A. Well, as the table says that it's not --</p> <p>15 it is significant at 10 percent level, but I'm really</p> <p>16 looking at all four dates combined to capture both</p> <p>17 the initial price drop and the subsequent rebound, so</p> <p>18 that's why I included that date. It's not the case</p> <p>19 that you can ignore a day among a set of dates if</p> <p>20 there is related information and not assess their</p> <p>21 joint significance. That is incorrect methodology.</p> <p>22 Q. But I thought that's what you just said</p> | <p style="text-align: right;">Page 195</p> <p>1 Q. Okay. And can you point me to support</p> <p>2 in the economic literature for inclusion of a stock</p> <p>3 price movement that's not statistically significant</p> <p>4 in a study of this nature?</p> <p>5 A. Again, if you're asking me for an</p> <p>6 academic paper as I sit here right now, I don't know</p> <p>7 that I'll give you that reference. But as a</p> <p>8 financial economist who's done thousands of event</p> <p>9 studies and published events studies in top finance</p> <p>10 journals, it is appropriate methodology.</p> <p>11 The opposite would not be appropriate,</p> <p>12 is that if the market learns some information over</p> <p>13 two dates and its related partial information, you</p> <p>14 look at both the dates.</p> <p>15 If the market says for a company, "Hey,</p> <p>16 we're going to have \$10 billion loss when we announce</p> <p>17 our earnings," and stock price drops by 40 percent,</p> <p>18 and then they announce in earnings that their loss</p> <p>19 turned out to be not \$10 billion, but \$6 billion, and</p> <p>20 the stock price goes up, there is no reasonable</p> <p>21 economic justification for not looking at both of the</p> <p>22 dates together to evaluate their significance.</p> |
| <p style="text-align: right;">Page 194</p> <p>1 you did with regard to the other dates in that</p> <p>2 interim period. You didn't include them because they</p> <p>3 were not statistically significant?</p> <p>4 A. I didn't say that. I say they were not</p> <p>5 economically significant. I didn't see any new</p> <p>6 economic information that would be significant.</p> <p>7 The way you do event studies properly</p> <p>8 is, as an expert, you form a judgment on what is</p> <p>9 economically significant, and then you run your</p> <p>10 market model. You don't run your market model and</p> <p>11 then say, "Aha, statistical significance must be</p> <p>12 something relevant."</p> <p>13 Q. So you're saying it's economically</p> <p>14 appropriate to include November 27th in your</p> <p>15 analysis, even though the stock reaction on that day</p> <p>16 was not economically significant to the 5 percent</p> <p>17 level?</p> <p>18 A. I think you meant statistically</p> <p>19 significant.</p> <p>20 Q. Yes. Thank you, Doctor.</p> <p>21 A. That is correct. That's what I'm</p> <p>22 saying.</p> | <p style="text-align: right;">Page 196</p> <p>1 That's exactly what I did here, and I</p> <p>2 think my explanation, regardless of some dense</p> <p>3 academic article, makes common economic sense, I</p> <p>4 hope.</p> <p>5 Q. And you're aware, I assume, that if you</p> <p>6 remove the November 27th date from your analysis and</p> <p>7 calculate a three-day return, the result would still</p> <p>8 be a company specific statistically significant</p> <p>9 decline?</p> <p>10 A. Why would I do that?</p> <p>11 Q. I'm asking: Are you aware that if you</p> <p>12 remove the November 27th date that's not</p> <p>13 statistically significant, that the decline in stock</p> <p>14 price overall over the three remaining dates would be</p> <p>15 a statistically significant decline?</p> <p>16 A. I didn't do that. I would never do</p> <p>17 that. It would be malpractice as a financial</p> <p>18 economist to do that. It would not be consistent</p> <p>19 with my obligation to offer a fair analysis to the</p> <p>20 Court.</p> <p>21 And regardless of these regressions and</p> <p>22 excess returns, I also provide the market cap drop on</p> |

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| <p style="text-align: right;">Page 197</p> <p>1 November 20th and the combined market cap gain on the</p> <p>2 capital raise dates, and what remains is less than</p> <p>3 1 percent.</p> <p>4 So economically, commonsensically,</p> <p>5 methodologically, I stand by what I did. And I</p> <p>6 reject any suggestion that I should have looked at</p> <p>7 excluding November 27th. I should not have, and I</p> <p>8 did not do that calculation.</p> <p>9 Q. You know how to do that calculation,</p> <p>10 correct?</p> <p>11 A. I know how to do a lot of things, but if</p> <p>12 they're not the right thing to do, I don't do that.</p> <p>13 Q. I'm just asking you. Answer my</p> <p>14 question, please. You know how to do the</p> <p>15 calculation, correct?</p> <p>16 A. Yes, I have a computer. I have Excel.</p> <p>17 I can do calculations, yes.</p> <p>18 Q. And you would have the excess returns</p> <p>19 for the 20th, 28th, and 30th, correct?</p> <p>20 A. I'm sorry. Repeat your question?</p> <p>21 Q. Did you start the analysis by adding the</p> <p>22 excess returns for November 20th, 28th, and 30?</p> | <p style="text-align: right;">Page 199</p> <p>1 days whether there's a statistically significant</p> <p>2 decline if you excluded November 27th, correct?</p> <p>3 You're capable of performing that</p> <p>4 calculation, right?</p> <p>5 A. As I said, I'm capable of doing</p> <p>6 something wrong, but I don't make it a habit to do</p> <p>7 something incorrect.</p> <p>8 Q. So the answer is yes, correct?</p> <p>9 A. Yeah, I -- as I said three questions</p> <p>10 ago, I can add and subtract, yes.</p> <p>11 Q. And the answer is yes. All right.</p> <p>12 A. Okay.</p> <p>13 Q. And if you did that, do you have any</p> <p>14 reason to dispute that there would still be a company</p> <p>15 specific statistically significant decline using</p> <p>16 those three dates?</p> <p>17 A. I don't know. I did not do that</p> <p>18 calculation, nor would I.</p> <p>19 Q. I understand that, Doctor. If I told</p> <p>20 you the T statistic was 2.36, would you agree that</p> <p>21 that is statistically significant when using those</p> <p>22 three dates?</p> |
| <p style="text-align: right;">Page 198</p> <p>1 A. No, I would not. I would never do that.</p> <p>2 Q. I'm saying if you wanted to calculate</p> <p>3 using just those three dates, you would start by</p> <p>4 adding the excess returns for those three dates,</p> <p>5 correct?</p> <p>6 MR. BLOCK: Why don't you take the "you"</p> <p>7 out of it, then you might not have problems with</p> <p>8 the question.</p> <p>9 MR. MARKOVITS: Thank you, Freddie.</p> <p>10 BY MR. MARKOVITS:</p> <p>11 Q. If one wanted to calculate the excess</p> <p>12 returns for those three dates combined, one would</p> <p>13 first add the excess returns for those three dates,</p> <p>14 correct?</p> <p>15 A. Well, if the supposed one was a</p> <p>16 noneconomist lawyer, I would tell them that's totally</p> <p>17 a wrong thing to do. I suppose you can do anything.</p> <p>18 You don't need me to answer that question. You can</p> <p>19 do it yourself.</p> <p>20 Q. Well, you can do it yourself, too.</p> <p>21 You're an economist. What I'm asking is: You can do</p> <p>22 the economic calculation to determine for those three</p> | <p style="text-align: right;">Page 200</p> <p>1 A. I don't know whether it was 2.36 or</p> <p>2 1.62.</p> <p>3 Q. I'm saying if I told you it was 2.36 for</p> <p>4 a T statistic, you would agree that that would be</p> <p>5 statistically significant, correct?</p> <p>6 A. Sir, I am a financial economist. I --</p> <p>7 Q. Right, Doctor? Is a T statistic of 2.36</p> <p>8 statistically significant, yes or no?</p> <p>9 A. Yes, it is.</p> <p>10 Q. All right. Thank you.</p> <p>11 You also state in your opinion, in your</p> <p>12 view, that the stock rebound that occurred by</p> <p>13 November 30th has to be considered. I think we've</p> <p>14 heard that almost ad nauseam for the past 10,</p> <p>15 15 minutes, correct?</p> <p>16 A. I don't know about ad nauseam, but yes,</p> <p>17 it should be considered.</p> <p>18 Q. Fair enough.</p> <p>19 And here, you're looking at ten days</p> <p>20 out. How many days out would your methodology</p> <p>21 provide?</p> <p>22 A. I don't understand your question.</p> |

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| <p style="text-align: right;">Page 201</p> <p>1 Q. Well, why didn't you look past 2 November 30th? 3 A. There was no reason to look past 4 November 30th. I was interested in understanding 5 which of the three potential reasons could be related 6 to stock price drop observed on November 20th. 7 Reason number one -- 8 Q. Do you know whether or not -- do you 9 know whether or not, Doctor, the stock declined after 10 November 30th for Freddie Mac? 11 A. I don't know. I didn't look at it. 12 There was no reason for me to look at it. 13 Q. Are you aware of any case in which the 14 price declined from a corrected disclosure on one day 15 was offset by the price increase from a positive 16 disclosure on a different day when determining price 17 impact? 18 A. Are you asking me about case law? 19 Q. Yes. Have you been involved in any 20 case, or do you know of any case, which a price 21 decline from a corrected disclosure from one day was 22 offset by a price increase from a positive disclosure</p> | <p style="text-align: right;">Page 203</p> <p>1 Q. The question was limited to whether 2 there were any cases. You're not answering my 3 question, but go ahead. 4 A. Okay. I gave you an example. A company 5 says on date one, we're going to have a \$10 billion 6 loss. Stock price goes down from \$10 a share to, 7 say, \$5 a share, 50 percent drop. On day two, the 8 company says, "Hey, our loss is not \$10 billion. 9 It's actually \$4 billion." And stock price goes up 10 on that day from \$5 to \$8. 11 I know of no qualified economist who 12 would say that you should not add these two dates 13 together and say that the loss announced by the 14 company led to a 20 percent and not a 50 percent 15 stock price decline. You don't need a Ph.D. in 16 economics to reach that conclusion. 17 Now, are you asking me as I sit here 18 right now to give you, from recall, any of my 19 testimony on record where I looked at more than one 20 date together? I'd have a hard time recalling a 21 specific case, but as I told you, I'm certain I've 22 done that because that's the right methodology, and I</p> |
| <p style="text-align: right;">Page 202</p> <p>1 on a different date when determining price impact? 2 A. So I'm not a lawyer. I don't pretend to 3 understand nuances of the difference between price 4 impact versus loss causation. What I will tell 5 you -- 6 Q. I'm taking for either. For either price 7 impact or loss causation, have you been -- let's 8 start with your involvement. 9 Have you been involved in any case where 10 you've taken the position that a price decline from a 11 corrected disclosure on one date had to be offset by 12 a price increase from a positive disclosure on a 13 subsequent date? 14 A. Among over a hundred cases I've worked 15 on, I am certain I have. It depends on whether the 16 two disclosure dates are related. I gave you an 17 example. 18 Q. Can you name one? 19 A. Well, let me finish my answer, please, 20 Counsel. 21 Q. All right. 22 A. I gave you an example.</p> | <p style="text-align: right;">Page 204</p> <p>1 see it being done all the time. 2 Q. All right. If after this deposition you 3 can review or think of or come across any case that 4 you've been involved in where you've done this type 5 of analysis, could you let me know, please? 6 A. Of course. Actually, now that you 7 mentioned this, it doesn't mean there won't be other 8 examples. 9 If I recall correctly, your first expert 10 in class certification stage, Mr. Hallman, claimed 11 that even if stock price changed on a given 12 disclosure -- defective disclosure date was not 13 significant, he should add up and look at joint 14 economic significance of all the disclosure dates. 15 Your latest economic expert, Dr. Tabak, 16 often advances methodology that is predicated on the 17 very same reasoning, when he looks at a group of 18 dates when there is purportedly news versus group of 19 dates when there is no news. That is also predicated 20 on the same reasoning, whether or not that 21 methodology is correct. 22 I will see if I can find examples, but I</p> |

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| <p style="text-align: right;">Page 205</p> <p>1 wanted to get you started by what I just described.</p> <p>2 Q. I appreciate that, although I don't</p> <p>3 think those are valid comparisons, but in any case --</p> <p>4 let's talk about in this case. Not a situation where</p> <p>5 you have a disclosure and then a correction, but</p> <p>6 here, what you're saying is there was a disclosure of</p> <p>7 a large loss, which -- and an indication of capital</p> <p>8 constraints, in part, due to those large losses,</p> <p>9 correct?</p> <p>10 A. Okay.</p> <p>11 Q. And then on -- as of November 20th --</p> <p>12 and then what you're saying is, because they were</p> <p>13 able to raise capital and the stock price went up,</p> <p>14 are you saying there's no price impact, there's,</p> <p>15 therefore, no loss causation, or what?</p> <p>16 A. So first of all, I'm saying there is no</p> <p>17 loss causation.</p> <p>18 Q. Okay.</p> <p>19 A. Now, I happen to be a reforming</p> <p>20 professor, and I'm happy to give you a very simple</p> <p>21 example to clear up the confusion. But if you're not</p> <p>22 interested in learning that, I will resist my</p> | <p style="text-align: right;">Page 207</p> <p>1 drop on date one. It had to do with some bad news,</p> <p>2 whether or not it was allegation related, and there</p> <p>3 were concerns about capital."</p> <p>4 But given that Freddie Mac soon was able</p> <p>5 to raise capital and the price rebounded by \$2.50,</p> <p>6 you can interpret the remaining \$2.50 as the effect</p> <p>7 of bad news.</p> <p>8 Now, consider another counterfactual --</p> <p>9 or not so much a counterfactual. On day two, Freddie</p> <p>10 Mac says, "Hey, we've raised capital," and the stock</p> <p>11 price goes to \$10. What is the only logical</p> <p>12 inference of those two observations, that \$5 a share</p> <p>13 stock price drop on date one was fully accounted for</p> <p>14 concern about Freddie Mac's ability to raise capital</p> <p>15 which was resolved on day two, so there is nothing</p> <p>16 left to explain.</p> <p>17 That is the simple logic of what I did.</p> <p>18 And when you combine it with the evidence I presented</p> <p>19 about Fannie Mae's stock price, I don't see any other</p> <p>20 explanation.</p> <p>21 And your economist, Dr. Tabak, did not</p> <p>22 criticize me for this logic, other than some</p> |
| <p style="text-align: right;">Page 206</p> <p>1 temptation.</p> <p>2 Q. Can you do it in two minutes or less?</p> <p>3 A. I think I can.</p> <p>4 Q. Go for it.</p> <p>5 A. Okay. So consider a circumstance where,</p> <p>6 hypothetically speaking, Freddie Mac announced losses</p> <p>7 or whatever it announced on November 20th, and its</p> <p>8 stock price went from \$20 a share to \$10 a share.</p> <p>9 And what the market learned on November 20th is, hey,</p> <p>10 we may not have access to capital, so our go-forward</p> <p>11 long-term franchise value may be impaired, and the</p> <p>12 market also learned about some losses. So the</p> <p>13 combined of effect of those two pieces of information</p> <p>14 was a 50 percent drop in stock price from \$10 to \$5.</p> <p>15 Now, imagine on date two, soon</p> <p>16 thereafter, before things had changed, the whole</p> <p>17 market had changed, consider a counterfactual.</p> <p>18 Freddie Mac said, "Hey, we were able to raise capital</p> <p>19 at fair prices," and the stock price went up from \$5</p> <p>20 to \$7.50.</p> <p>21 So an economist looking at this pattern</p> <p>22 would say, "Yes, there was \$5 a share stock price</p> | <p style="text-align: right;">Page 208</p> <p>1 back-of-the-hand comments that I don't, for the life</p> <p>2 of me, understand. He did not provide any</p> <p>3 calculations of the type you're asking me to assume.</p> <p>4 He did not provide any event study for these dates.</p> <p>5 He did not review market information and say, "Hey,</p> <p>6 there was some residual stock price drop." And</p> <p>7 suppose there were, as a plaintiff expert, he would</p> <p>8 still have a burden to say the remaining stock price</p> <p>9 drop had to do with materialization of undisclosed</p> <p>10 risks and not materialization of disclosed risks.</p> <p>11 Did I do it in two minutes?</p> <p>12 Q. Not really.</p> <p>13 A. Is this a good time for us to take a</p> <p>14 little break?</p> <p>15 MR. MARKOVITS: A little break.</p> <p>16 THE WITNESS: Okay. Thank you.</p> <p>17 (Brief recess.)</p> <p>18 MR. MARKOVITS: Back on the record.</p> <p>19 BY MR. MARKOVITS:</p> <p>20 Q. Dr. Bajaj, is your view that Freddie</p> <p>21 Mac's announcements from November 27th through 30th,</p> <p>22 2007 regarding its capital raise corrected any</p> |

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| <p style="text-align: right;">Page 209</p> <p>1 alleged misrepresentations or omissions?</p> <p>2 A. To the extent those misrepresentations</p> <p>3 and omissions include such allegations about capital</p> <p>4 raise, they obviously corrected those.</p> <p>5 Q. Is it your understanding that any of</p> <p>6 plaintiff's allegations regard to misrepresentations</p> <p>7 or omissions regarding Freddie's ability to raise</p> <p>8 capital?</p> <p>9 A. So what are they about then?</p> <p>10 Q. Isn't that your understanding, that</p> <p>11 they're about the ability to raise capital versus the</p> <p>12 strength of Freddie Mac's capital position?</p> <p>13 A. If you're referring to -- and I'm</p> <p>14 forgetting the words Dr. Tabak used -- is that the</p> <p>15 allegations were about capital being insufficient and</p> <p>16 not about ability to raise capital. That statement</p> <p>17 makes no economic sense, because why would lack of</p> <p>18 capital be of consequence to investors if that lack</p> <p>19 of capital can be remedied by ability to raise</p> <p>20 capital. And in this case that was demonstrated, so</p> <p>21 I stand by the fact that to the extent there are some</p> <p>22 allegations about capital issues -- which I frankly</p> | <p style="text-align: right;">Page 211</p> <p>1 not a mandatory methodology is specified under PSLRA,</p> <p>2 as you seem to imply in your question. But, if there</p> <p>3 is no loss causation, obviously there is no damage.</p> <p>4 Whether you go 90 days past or you go 900 days past,</p> <p>5 it doesn't matter.</p> <p>6 Q. But you went ten days past, correct?</p> <p>7 A. I went seven trading days past because</p> <p>8 that was particularly relevant, given the evidence</p> <p>9 and the allegations that I reviewed.</p> <p>10 Q. Did you look to see if there were other</p> <p>11 announcements during that seven-business-day period</p> <p>12 that could have accounted for some or all the Freddie</p> <p>13 Mac stock increase?</p> <p>14 A. I did look at all the analyst reports.</p> <p>15 I did look at what Freddie Mac announced. And I did</p> <p>16 not find anything that would account for the price</p> <p>17 rebound in Freddie Mac's stock on the dates that are</p> <p>18 the capital raise dates as per my report.</p> <p>19 Q. Let me give you a hypothetical, Doctor.</p> <p>20 I want you to assume that a company misrepresents its</p> <p>21 adherence to its underwriting during a relevant</p> <p>22 period, and the risk relating to that</p> |
| <p style="text-align: right;">Page 210</p> <p>1 have never understood the nature of those</p> <p>2 allegations -- the price rebound takes care of that.</p> <p>3 Q. You've been involved in damages</p> <p>4 calculations for securities cases, correct?</p> <p>5 A. Yes.</p> <p>6 Q. You're familiar with the PSLRA, private</p> <p>7 securities litigation format?</p> <p>8 A. Only in the sense of, as an economist,</p> <p>9 I've heard the term and I understand that it imposes</p> <p>10 some particular requirements, whatever that means</p> <p>11 legally. But I'm not a lawyer. I don't really claim</p> <p>12 to know about PSLRA.</p> <p>13 Q. Have you ever dealt with a PSLRA in</p> <p>14 terms of the 90-day lookback period with regard to</p> <p>15 any damage analysis in a securities matter?</p> <p>16 A. I'm not familiar with that provision.</p> <p>17 Q. So you are not -- you don't know whether</p> <p>18 or not the PSLRA limits damages -- the difference</p> <p>19 between the price paid and the mean trading price for</p> <p>20 the 90-day period, beginning from the date of</p> <p>21 correctional materialization?</p> <p>22 A. Again, I'm going to speak to whether or</p> | <p style="text-align: right;">Page 212</p> <p>1 misrepresentation materializes on a given date, and</p> <p>2 that company stock drops 29 percent as a result.</p> <p>3 I want you also to assume that seven</p> <p>4 business days later, there's good news about an</p> <p>5 infusion of capital for that company, and the stock</p> <p>6 price increases by the same amount, 29 percent.</p> <p>7 In your opinion, under that</p> <p>8 hypothetical, is there a loss causation?</p> <p>9 A. I'm sorry. I'm going to request you to</p> <p>10 read the question again, please?</p> <p>11 Q. Okay. Assume that for a given company,</p> <p>12 it misrepresents adherence to its underwriting during</p> <p>13 a relevant period, and that risk relating to that</p> <p>14 misrepresentation materializes on a day of stock that</p> <p>15 the company drops 29 percent as a result of that</p> <p>16 materialization of that undisclosed risk.</p> <p>17 I want you to also assume that seven</p> <p>18 business days later, there's good news about an</p> <p>19 infusion of capital, and the stock price for that</p> <p>20 company increases by that same amount, 29 percent.</p> <p>21 In your view, is there loss causation,</p> <p>22 assuming there were no intervening price movements?</p> |

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| <p style="text-align: right;">Page 213</p> <p>1 A. Well, in your counterfactual hypothesis, 2 you do not provide me with a complete hypothetical in 3 the following sense. 4 If the company raises capital, in your 5 hypothetical, the stock price goes up by 29 percent. 6 The only way that would make economic sense is if the 7 capital was provided to the company at below market 8 prices, and people providing that capital did not 9 understand that they were giving away capital for a 10 song, while the shareholders of the company 11 understood that the company just got a bunch of free 12 money as capital raised and, therefore, as an 13 unrelated matter, its stock price went up. 14 So that's not, from an economic 15 perspective, a sensible hypothetical. It's 16 incomplete. It's counterfactual. And I can't answer 17 whether, in that hypothetical, there would be loss 18 causation or not without having more details in the 19 hypothetical. 20 Q. That might be your answer. Let's try a 21 little bit different variation. We'll probably get 22 the same answer, but let's see.</p> | <p style="text-align: right;">Page 215</p> <p>1 Q. And that's based primarily on your, 2 what, analysts review and news review? 3 A. As well as my subsequent analysis of 4 stock price rebound on capital raise dates. 5 Q. Okay. I'm going to take a risk and 6 venture into the hypothetical world again. 7 Assume there was a financial crisis that 8 primarily impacts financial service companies and 9 many of those companies announce large losses. But 10 when a company announces a large loss, but its stock 11 price does not move in a statistically significant 12 manner, all else being equal, meaning there's no 13 offsetting good news, does that suggest that the 14 market anticipated the loss? 15 A. It's an incomplete hypothetical, but 16 that could be one of the reasons why the company 17 stock price didn't move. For example, if the company 18 says, "We expect a \$10 billion loss" and stock price 19 drops by 50 percent. And then on day two they say, 20 "We have a \$10 billion loss," the market's already 21 heard it. You wouldn't expect the stock price to 22 move.</p> |
| <p style="text-align: right;">Page 214</p> <p>1 On a given day, a company that had been 2 misrepresenting its exposure to poor underwriting 3 announces a loss that's attributable to that poor 4 underwriting, and the stock declines 29 percent as a 5 result. Seven business days later, that company 6 enters into lucrative new contracts, and as a result 7 of those lucrative new contracts, the stock price 8 increases 29 percent. 9 Is there loss causation? 10 A. Assuming that we are limited to that 11 hypothetical, the second announcement is unrelated to 12 that first announcement, and hence, you would not 13 offset the positive with the negative. 14 And if I may, I think I can give you a 15 better hypothetical. 16 Q. No, that's okay. I just wanted the 17 answer. 18 A. Okay. 19 Q. Am I correct that it's your opinion that 20 the stock drop on November 20th, 2007, was largely 21 caused over concerns about Freddie Mac's capital? 22 A. Given the totality of the evidence, yes.</p> | <p style="text-align: right;">Page 216</p> <p>1 And it would be incorrect to look at 2 just the second announcement and say, "Stock price -- 3 or loss announcements had no effect on stock prices." 4 You would look at both of those dates together. 5 Q. Got it. Does the academic literature on 6 event studies analyze one single firm making one 7 announcement, or does it analyze multiple firms 8 making similar announcements at different points in 9 time? 10 A. Well, it depends on the context. I've 11 seen academic studies that look at one individual 12 company. I've looked at more academic studies. 13 Given the question that they're trying to answer, 14 look at a large sample of companies making, 15 quote-unquote, similar announcements. 16 Q. Can you name for me any academic article 17 that performs an event study on a single event for a 18 single firm? 19 A. Again, I don't have the reference 20 memorized, but if I recall correctly, there is a 21 paper by Professor Brad Cornell that looked at a 22 single firm event study, but I'll have to look. I</p> |

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| <p style="text-align: right;">Page 217</p> <p>1 can't recall right off the top of my head.</p> <p>2 Q. Would you agree that most of the</p> <p>3 academic literature relating to event studies deals</p> <p>4 with multiple firms making similar announcements at</p> <p>5 different periods in time?</p> <p>6 A. Well, the key word is "similar." And,</p> <p>7 again, context is everything. And I'm not aware of</p> <p>8 academic studies that address circumstances like the</p> <p>9 one we are dealing with today, that we face in</p> <p>10 securities litigation, where there's an allegation</p> <p>11 that a firm announced something and it was bad news</p> <p>12 that must have been previously withheld.</p> <p>13 Well, in that case, obviously, we are</p> <p>14 looking at a very different circumstance than if the</p> <p>15 question was, is it true that, on average, market</p> <p>16 sees past what should be an economic nonevent, such</p> <p>17 as a stock split?</p> <p>18 And if you do observe a positive stock</p> <p>19 price reaction on average upon announcement of stock</p> <p>20 splits by a large sample of firms, what would be an</p> <p>21 economically sensible explanation? Academic studies</p> <p>22 in general are of that genre, and that's why most</p> | <p style="text-align: right;">Page 219</p> <p>1 significant social economic risks, correct?</p> <p>2 A. Oh, I see. If you're asking me about</p> <p>3 case law, I am not -- I wouldn't be surprised there</p> <p>4 are cases like that, but I don't follow case law per</p> <p>5 se.</p> <p>6 Q. Let's try this from an economic</p> <p>7 perspective. If there are significant undisclosed</p> <p>8 economic risks that materialize, they could cause</p> <p>9 unexpected losses, correct?</p> <p>10 A. Can you repeat the question again?</p> <p>11 Q. A significant undisclosed economic risk</p> <p>12 materialized, they could cause unexpected losses,</p> <p>13 correct?</p> <p>14 A. In the hypothetical, yes.</p> <p>15 Q. Unexpected losses if they're significant</p> <p>16 may cause the stock price to drop, right?</p> <p>17 A. Again, as a purely hypothetical matter,</p> <p>18 yes.</p> <p>19 Q. And this is true even if the cause of</p> <p>20 the unexpected loss is not disclosed, right?</p> <p>21 A. Well, if you are talking about this in</p> <p>22 the context of securities litigation, I understand</p> |
| <p style="text-align: right;">Page 218</p> <p>1 academic studies look at a large sample of firms.</p> <p>2 Q. Let me switch topics.</p> <p>3 You would agree that companies may fail</p> <p>4 to disclose significant economic risks, correct?</p> <p>5 A. Are you asking me a particular company,</p> <p>6 or are you saying it's hypothetical?</p> <p>7 Q. Hypothetically, yes or no, you would</p> <p>8 agree that companies may fail to disclose significant</p> <p>9 economic risks?</p> <p>10 MR. BLOCK: Objection to form.</p> <p>11 THE WITNESS: If you're asking me is it</p> <p>12 true that companies are -- conduct criminal</p> <p>13 acts, is it possible? Yes, it is possible.</p> <p>14 Anything is possible. So I don't understand why</p> <p>15 you're asking an expert economist to comment on</p> <p>16 this hypothetical where your hypothetical</p> <p>17 presupposes the answer.</p> <p>18 BY MR. MARKOVITS:</p> <p>19 Q. It doesn't presuppose the answer. I'm</p> <p>20 just asking you: Are you familiar that there are</p> <p>21 nondisclosure cases where courts and juries have</p> <p>22 determined that companies have failed to disclose</p> | <p style="text-align: right;">Page 220</p> <p>1 that one might allege that. That's not what your</p> <p>2 complaint alleges in this case, and there would</p> <p>3 still be --</p> <p>4 Q. If you could just limit yourself to my</p> <p>5 question, please.</p> <p>6 It's true that unexpected losses can</p> <p>7 cause stock price to drop. You've agreed with that.</p> <p>8 And that's true even if the unexpected loss -- the</p> <p>9 cause of the unexpected loss is not disclosed at the</p> <p>10 time the loss is announced, correct?</p> <p>11 MR. BLOCK: Objection to form.</p> <p>12 THE WITNESS: Are you asking me to</p> <p>13 assume that the company that experienced loss</p> <p>14 due to materialization of previously undisclosed</p> <p>15 risk lied to hide the cause for that loss?</p> <p>16 BY MR. MARKOVITS:</p> <p>17 Q. Just did not disclose. Whether they</p> <p>18 lied or not, they did not disclose the loss. There</p> <p>19 is an undisclosed material risk that materializes and</p> <p>20 the cause of the loss is not disclosed, and that can</p> <p>21 cause the stock price to drop, whether or not the</p> <p>22 cause is disclosed?</p> |

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| <p style="text-align: right;">Page 221</p> <p>1 The company announces a \$10 billion, 2 \$100 million dollar, whatever, a significance portion 3 loss, its stock price can drop -- would likely drop, 4 even if it doesn't disclose the reason for that loss, 5 correct? 6 A. Disclosure for reason of the loss or not 7 has nothing to do with your hypothetical. If a 8 company announces an unexpected loss, then you expect 9 the stock price to drop, period. 10 Q. Yes. Good. We're in agreement. 11 A. Okay. 12 Q. And if the cause of the unexpected loss 13 is not just clutters, then analysts would have no 14 reason to discuss it, correct? 15 MR. BLOCK: Objection to form. 16 THE WITNESS: If analysts do what 17 they're supposed to do and they analyze the 18 company, they are usually able to ferret out 19 what the cause of the loss is. But if all the 20 analysts were asleep at the switch and the 21 company lied about reason for its loss and 22 misrepresented the reason, then in your</p> | <p style="text-align: right;">Page 223</p> <p>1 Q. You'd agree that poor underwriting or 2 failure to follow underwriting standards could also 3 contribute to impairment of capital? 4 A. Well, if it can be shown that the 5 alleged underwriting deficiencies caused economically 6 significant economic losses, then that could happen. 7 Q. And similarly, you would agree that a 8 failure to engage in fraud detection can contribute 9 to an impairment of capital for a company like 10 Freddie Mac? 11 A. Same answer -- 12 MR. MARKOVITS: Object to form. 13 THE WITNESS: Same answer. 14 BY MR. MARKOVITS: 15 Q. Can you turn to paragraph 20 of your 16 report, Doctor, on page 11? 17 A. I see it. 18 Q. If you look at the last line there, it 19 says: "In this report, I analyze and evaluate, from 20 an economic perspective, materiality and loss 21 causation and the related economic evidence." 22 And I just want to be clear here -- we</p> |
| <p style="text-align: right;">Page 222</p> <p>1 hypothetical, what you propose could happen. 2 BY MR. MARKOVITS: 3 Q. Let me get back to your opinion 4 regarding capital is one the reasons for the stock 5 price drop on November 20th, 2007. 6 Is it your opinion that the apparent of 7 capital that occurred on that date -- that was 8 disclosed on that date is not related to OFHEO's 9 allegations? 10 A. If the stock price rebounded, then by 11 definition, OFHEO's allegation was not economically 12 significant with regards to capital or anything else. 13 Q. Do you recognize that OFHEO's 14 allegations include allegations that Freddie Mac 15 misrepresented the strength of its capital position? 16 A. I've seen that allegation, yes. 17 Q. You'd agree that losses due to 18 undisclosed credit risk would likely contribute or 19 could contribute to a possible impairment of capital? 20 A. Losses of any kind, whether related to 21 allegations or not, could lead to impairment of 22 capital.</p> | <p style="text-align: right;">Page 224</p> <p>1 talked a little bit about this before -- as this case 2 moves forward, are you intending to provide any 3 opinion regarding materiality, whether from an 4 economic perspective or otherwise? 5 A. Well, I will provide an opinion on 6 economic significance. And that's the sense in which 7 I say materiality from an economic perspective. I 8 would not provide an opinion on ultimate conclusion 9 on materiality which is the province of the trier of 10 fact. 11 Q. In the last section of your report, 12 Doctor, which is Section 9, I believe, you address 13 the individual defendants' trading in Freddie Mac's 14 securities. It begins on page 119. 15 A. Yes, I see it. 16 Q. Are you familiar with the legal doctrine 17 of scienter as it applies in securities cases? 18 A. Can you please repeat your question? 19 Q. Are you familiar with the legal doctrine 20 of scienter as it applies in securities cases? 21 A. Only in layman economic terms, that it 22 has to do with defendants' state of mind that can</p> |

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| <p style="text-align: right;">Page 225</p> <p>1 sometimes be inferred in a context like this, from</p> <p>2 trading in a way that avoids impending loss that it</p> <p>3 knew was going to happen.</p> <p>4 Q. Are you intending to provide any opinion</p> <p>5 regarding whether individual defendants had scienter</p> <p>6 in this case?</p> <p>7 A. No, I will provide opinion on facts</p> <p>8 regarding their trading behavior, and that my</p> <p>9 analysis shows that the individual -- that I did not</p> <p>10 find any evidence that individual defendants engaged</p> <p>11 in trading in Freddie Mac securities that was unusual</p> <p>12 or suspicious in timing or amount, as I say in</p> <p>13 paragraph 264, which is the last paragraph of my</p> <p>14 report.</p> <p>15 Q. And is there any support in the economic</p> <p>16 literature in terms of determining whether trading is</p> <p>17 unusual or suspicious in timing or amount?</p> <p>18 A. Well, there is academic literature which</p> <p>19 sees -- which analyzes whether, on average, insiders</p> <p>20 sell before an economically material adverse event or</p> <p>21 vice versa.</p> <p>22 There is academic literature tracking</p> | <p style="text-align: right;">Page 227</p> <p>1 defendants were unusual and suspicious in time and</p> <p>2 amount?</p> <p>3 A. Again, it's one of those hypotheticals.</p> <p>4 If you asked me to assume that company officials knew</p> <p>5 before the start of the relevant period that Freddie</p> <p>6 Mac and the rest of the financial industry was going</p> <p>7 to go through hell and they got rid of their stock</p> <p>8 with that knowledge, then you can make that argument</p> <p>9 in front of a court, but my analysis was limited to</p> <p>10 the relevant period.</p> <p>11 Q. And in paragraph 257, you conclude that</p> <p>12 none of the defendants engaged in trading that was</p> <p>13 unusual or suspicious in timing and amount. Then you</p> <p>14 say: "To the contrary, the evidence shows that</p> <p>15 individual defendants' holdings of Freddie Mac's</p> <p>16 securities declined substantially in value over the</p> <p>17 course of the relevant period."</p> <p>18 A. You read that correctly.</p> <p>19 Q. Are you suggesting that because their</p> <p>20 holdings declined substantially, none of the trades</p> <p>21 could have been unusual or suspicious in timing or</p> <p>22 not?</p> |
| <p style="text-align: right;">Page 226</p> <p>1 returns that -- insiders rates of returns that</p> <p>2 insiders realize on trading off their own company</p> <p>3 stock, and whether those returns might raise a</p> <p>4 question that they were trading on the basis of</p> <p>5 insider information.</p> <p>6 There is literature in economics on the</p> <p>7 so-called strong form of market efficiency that looks</p> <p>8 like --</p> <p>9 Q. Let me just stop you there, Doctor, for</p> <p>10 a second in the interest of time.</p> <p>11 Other than setting out in this section</p> <p>12 the defendant's trading activity, what economic</p> <p>13 analysis did you undertake to determine whether</p> <p>14 defendant's trading was unusual or suspicious in time</p> <p>15 and amount?</p> <p>16 A. Well, the analysis I did is laid out in</p> <p>17 paragraphs 256 to 263.</p> <p>18 Q. And you analyzed stock sales during the</p> <p>19 relevant period?</p> <p>20 A. Yes.</p> <p>21 Q. Could stock trades prior to the relevant</p> <p>22 period bear on whether the stock sales of individual</p> | <p style="text-align: right;">Page 228</p> <p>1 A. Well, if I recall correctly, my analysis</p> <p>2 shows that there were no sales of shares, period,</p> <p>3 suspicious or otherwise, except for a relatively</p> <p>4 small sale by Ms. Cook during the relevant period.</p> <p>5 And that, I understand to be pursuant a 10b-5 plan or</p> <p>6 whatever that Safe Harbor is called.</p> <p>7 Q. Do you know what restrictions, if any,</p> <p>8 there were under the sales by individual defendants</p> <p>9 during the relevant period?</p> <p>10 A. Not as a factual matter. I understand</p> <p>11 that insiders are told, due to the kind of concerns</p> <p>12 you are raising, not to trade company stock during a</p> <p>13 certain period, for example, around earnings</p> <p>14 announcement dates. I don't know if it's a</p> <p>15 requirement or it's learned ways, but I'm familiar</p> <p>16 that companies do often have those policies.</p> <p>17 Q. In paragraph 264, in your summary</p> <p>18 paragraph, you did not find any evidence that</p> <p>19 individual defendants engaged in trading of Freddie</p> <p>20 Mac securities that were unusual or suspicious in</p> <p>21 timing and amount. And then you say: "They did not</p> <p>22 benefit from the alleged fraud during the relevant</p> |

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| <p style="text-align: right;">Page 229</p> <p>1 period."</p> <p>2 Are you limiting that second sentence to</p> <p>3 the terms of trading and securities that was unusual</p> <p>4 and suspicious in timing or amount, or are you</p> <p>5 saying, generally, that you can conclude from the</p> <p>6 lack of unusual or suspicious trading, that they did</p> <p>7 not benefit from the alleged fraud?</p> <p>8 MR. BLOCK: Objection to form.</p> <p>9 THE WITNESS: I'm sorry. That question</p> <p>10 got complicated for me at this hour.</p> <p>11 BY MR. MARKOVITS:</p> <p>12 Q. Yes, it did get a little bit</p> <p>13 complicated. Let me break it down.</p> <p>14 Are you saying, generally, that you can</p> <p>15 conclude from your analysis of their trading that</p> <p>16 they did not benefit from the alleged fraud during</p> <p>17 the relevant period?</p> <p>18 A. I'm not making a general conclusion.</p> <p>19 That sentence appears in the context of my analysis,</p> <p>20 which is that they did not actually sell stock during</p> <p>21 the relevant period, except, as I said, for a small</p> <p>22 amount of stock by Ms. Cook, pursuant to a</p> | <p style="text-align: right;">Page 231</p> <p>1 A. I'm sorry. That's an incomplete</p> <p>2 hypothetical. If they derived psychic benefits</p> <p>3 about -- from trying to ride the share of sticking</p> <p>4 with Freddie Mac during this difficult period, trying</p> <p>5 to be good colleagues, yeah, that could be a benefit</p> <p>6 to them, but I don't know what benefits you're</p> <p>7 talking about.</p> <p>8 Q. Any benefit. Are you going to give an</p> <p>9 opinion -- what I was getting at -- or I thought you</p> <p>10 said -- you're not generally giving an opinion that</p> <p>11 the defendants did not benefit from the alleged</p> <p>12 fraud; is that correct?</p> <p>13 A. As I told you before, my opinion is</p> <p>14 limited to my analysis of stock trades during the</p> <p>15 relevant period.</p> <p>16 Q. Okay. Let's look -- I know you wanted</p> <p>17 to talk about it, so let's look at Figure 3 in your</p> <p>18 report, which is the chart on page 4 of 4. You made</p> <p>19 this before, I believe. And that chart shows the</p> <p>20 dispersion of Freddie Mac's analyst EPS estimates on</p> <p>21 four different trading days, correct?</p> <p>22 A. I believe, as the title says, those are</p> |
| <p style="text-align: right;">Page 230</p> <p>1 prearranged sales plan.</p> <p>2 And based on that finding, I can say</p> <p>3 that that pattern of trading is not consistent with</p> <p>4 the allegations in the complaint that insiders sold a</p> <p>5 lot of shares to avoid impending stock price drop in</p> <p>6 Freddie Mac.</p> <p>7 Q. You're not disputing that the defendants</p> <p>8 may have benefitted in other ways?</p> <p>9 MR. BLOCK: Objection to form.</p> <p>10 THE WITNESS: Counsel, I didn't</p> <p>11 interview those defendants or those officers,</p> <p>12 but I can bet 100 to 1, they went through hell.</p> <p>13 They suffered a lot of loss in wealth. They</p> <p>14 suffered a lot of follow-on action.</p> <p>15 BY MR. MARKOVITS:</p> <p>16 Q. Let me stop you there, Doctor. Aside</p> <p>17 from what you can bet, did you do any analysis -- or</p> <p>18 let me put it this way.</p> <p>19 Are you going to give an opinion in this</p> <p>20 case as to whether or not the individual defendants</p> <p>21 benefited in any other way beyond the opinion you're</p> <p>22 giving with respect to their stock sales?</p> | <p style="text-align: right;">Page 232</p> <p>1 the last available EPS estimates by Freddie Mac</p> <p>2 analysts on earnings per share one date before those</p> <p>3 earnings were announced.</p> <p>4 So, for example, for Q4 2006, it looks</p> <p>5 at -- the day before Q4 2006, earnings were</p> <p>6 announced. If you look at all the analysts' EPS</p> <p>7 forecasts, what was the range between the highest and</p> <p>8 the lowest forecast, and it does so for four</p> <p>9 quarters.</p> <p>10 Q. Got it. And if I'm correct, the red</p> <p>11 dots are the outer limits of the range, and the blue</p> <p>12 dots are the estimates that fall in between those</p> <p>13 outer limits, correct?</p> <p>14 A. That is correct, yes.</p> <p>15 Q. And how were the analysts chosen?</p> <p>16 A. So we looked at all the analysts whose</p> <p>17 EPS estimates were available on the commercial data</p> <p>18 source for earnings per share estimates by analysts.</p> <p>19 That's called Refinitiv Eikon. And I believe, to the</p> <p>20 extent we had any analyst report that wouldn't be</p> <p>21 covered within that database, we added that as well.</p> <p>22 I am almost certain about my last</p> |

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| <p style="text-align: right;">Page 233</p> <p>1 statement, but if I misremember, I'll make sure</p> <p>2 I correct the transcript.</p> <p>3 Q. Okay. And so, the analysts were limited</p> <p>4 to that -- these particular dates: March 22nd,</p> <p>5 June 13th, August 29th, and November 19th?</p> <p>6 A. Not quite. It's whatever analyst</p> <p>7 estimates were available for Q4 2006 that were the</p> <p>8 last available EPS estimate prior to Q4 2006, as is</p> <p>9 common in these kind of estimates. Some of these</p> <p>10 estimates could be a day old, some could be a week or</p> <p>11 a month old. But what we wanted to do was look at</p> <p>12 the latest estimates available from analysts about</p> <p>13 that particular quarter as of the day before that</p> <p>14 quarter's earnings were announced.</p> <p>15 Q. Okay. How far back did you go?</p> <p>16 So if you were looking for the day</p> <p>17 before up to March 22nd, how far back before</p> <p>18 March 22nd did you search the database for EPS</p> <p>19 estimates by analysts?</p> <p>20 A. I don't remember as I sit here today,</p> <p>21 but I'm happy to look at it and add that to the</p> <p>22 deposition transcript if you want me to.</p> | <p style="text-align: right;">Page 235</p> <p>1 A. Yes.</p> <p>2 Q. How is it determined which of the three</p> <p>3 analysts appeared to use a customized measure?</p> <p>4 A. So we tried and succeeded in almost</p> <p>5 every case to actually look at the data reported in</p> <p>6 that database and match it to the underlying analyst</p> <p>7 report. And when we did that, we realized that three</p> <p>8 analyst firms, if I recall correctly, Fox-Pitt,</p> <p>9 Prudential -- and the third name is escaping me right</p> <p>10 now. They didn't forecast GAAP earnings.</p> <p>11 And so, rather than give a conclusion</p> <p>12 from Figure 3, which might amount to mixing different</p> <p>13 measures of forecast, as a robustness check, we</p> <p>14 looked at what happens if we exclude those three</p> <p>15 analysts, and the range did not change. Meaning</p> <p>16 those analysts that did not follow forecasting GAAP</p> <p>17 earnings were not represented by red dots in</p> <p>18 Figure 3.</p> <p>19 MR. MARKOVITS: Okay. Goldy, could you</p> <p>20 mark as Exhibit, I guess, 455 and hand out</p> <p>21 what's Tab 2?</p> <p>22 THE WITNESS: Counsel, I know we're</p> |
| <p style="text-align: right;">Page 234</p> <p>1 It's my understanding that the database</p> <p>2 might have a procedure where they're not going to put</p> <p>3 a five-year old estimate in the database for a</p> <p>4 particular quarter. And analyst generally don't make</p> <p>5 quarterly earnings forecasts too far prior to the</p> <p>6 quarter.</p> <p>7 Now, there could be some variation, but</p> <p>8 my understanding from having looked at a lot of these</p> <p>9 underlying data is there's some dispersion. Some may</p> <p>10 be a week old, some may be four weeks old, but I</p> <p>11 can't tell the outer limits of that as I sit here</p> <p>12 right now. But we did provide you with all the</p> <p>13 underlying data behind Figure 4 -- Figure 3.</p> <p>14 Q. Can you turn to page 43, note 136? And</p> <p>15 that discusses the chart, correct? And it says: "In</p> <p>16 the EPS analysts' forecast data obtained from Eikon</p> <p>17 Refinitiv spotted in the figure, three analyst firms</p> <p>18 appear to use a customized measure of earnings, while</p> <p>19 the others used GAAP earnings. Removing the</p> <p>20 estimates from those three analysts does not change</p> <p>21 the conclusions drawn from the figure."</p> <p>22 Do you see that?</p> | <p style="text-align: right;">Page 236</p> <p>1 getting late in the day. I just need no more</p> <p>2 than five minutes just to take a quick break, if</p> <p>3 that's okay with you.</p> <p>4 MR. MARKOVITS: That's fine.</p> <p>5 [Exhibit 455, FM OPERS 00238114, was</p> <p>6 marked for identification.]</p> <p>7 (Brief recess.)</p> <p>8 MR. MARKOVITS: Back on the record.</p> <p>9 BY MR. MARKOVITS:</p> <p>10 Q. Dr. Bajaj, you have in front of you</p> <p>11 Exhibit 455, the first page of which I believe Kevin</p> <p>12 put up on the screen there, which is FM OPERS</p> <p>13 00238114, an Excel spreadsheet that was represented</p> <p>14 to be the backup for the chart in your report.</p> <p>15 Have you seen these documents before?</p> <p>16 A. Yes.</p> <p>17 Q. And if we take a look at what we see up</p> <p>18 on the screen on the first page of Exhibit 455, that</p> <p>19 shows the same dispersions on the chart in your</p> <p>20 report, right?</p> <p>21 A. Well, I can compare it or I can take</p> <p>22 your representation for it.</p> |

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| <p style="text-align: right;">Page 237</p> <p>1 Q. Well, take my representation for it for 2 now. 3 A. Okay. 4 Q. Could you turn to the second page of 5 Exhibit 455? And that's the -- on the Excel 6 spreadsheet, it's labeled as the chart data. And it 7 shows the EPS assessments for the various analyst 8 firms prior to the quarter's end, correct? 9 A. That is correct, yes. 10 Q. And different analyst firms appear, to 11 some extent, on the four different dates. There's 12 some that overlap, but some not, correct? 13 A. That is correct, because not all analyst 14 firms necessarily provide earnings forecast for all 15 quarters. Sometimes analyst firms stop following a 16 company. Sometimes they start following a company. 17 And there could also be incompleteness in the database 18 that we had available and/or lack of completeness in 19 all analyst reports ever written with such estimates 20 during this period. 21 Q. Okay. You mentioned earlier the firms 22 that you believe were using something other than GAAP</p> | <p style="text-align: right;">Page 239</p> <p>1 that are reflected by the dots on the chart, correct? 2 For example, in the blue there, you see 3 up on the screen, begins 3/22/07? 4 A. I'm sorry. What are you referring to? 5 Q. Look up on the screen. 6 A. Oh, I see. 7 Q. Do you see where it is highlighted? 8 That would show the firms that you were using for 9 your chart for 3/22/07, correct? 10 A. Well, actually, I believe that is true 11 with one clarification. The database does not 12 sometimes identify the firm -- 13 Q. Right. 14 A. -- because it's not given permission, I 15 assume, to identify firm. And when we could, we 16 traced the underlying analyst report and we did that 17 work to give you our decoding of the key as to -- 18 Q. That's the next tab. 19 MR. MARKOVITS: Kevin, can you turn to 20 that tab? 21 BY MR. MARKOVITS: 22 Q. So the permission -- for example, it has</p> |
| <p style="text-align: right;">Page 238</p> <p>1 for earnings per share estimate. Which of these 2 firms, 16 -- or 12 firms listed here were you 3 referring to? 4 A. I do recall that Fox-Pitt Kelton was one 5 of these firms. And I think I recall Prudential -- 6 no, maybe not Prudential. I don't remember from 7 memory alone, but if you would ask that question, we 8 would have provided you that answer, but it's not 9 something I recall as I sit here. 10 MR. MARKOVITS: Freddie, can I request I 11 get the answer to that. But also to the extent 12 we don't have them -- and you can let me know if 13 we have them -- can you provide any the actual 14 analyst reports that are being referenced here? 15 MR. BLOCK: Given it's late in the day, 16 can you just follow up with me in an email 17 tomorrow. We'll figure out what the answer is 18 and what we're willing to give you. 19 MR. MARKOVITS: Yes. 20 BY MR. MARKOVITS: 21 Q. Okay. If you go to the third tab 22 labeled Eikon BITNET, that shows the EPS estimates</p> | <p style="text-align: right;">Page 240</p> <p>1 various ones with permission denied, and then I guess 2 you did the work to identify what those permission 3 denied firms were, correct? 4 A. That is correct, yes. 5 Q. Okay. Now, turning back to Tab 3, for 6 the first date, there are six firms, correct? 7 A. Correct. 8 Q. Shown on this chart? 9 A. Correct. 10 Q. For the second date, it shows six firms, 11 correct? 12 A. That, if I'm counting correctly, is 13 correct. 14 Q. Now, I have a little question about 15 that. 16 MR. MARKOVITS: Kevin, can you go back 17 to the chart date on the second tab? 18 BY MR. MARKOVITS: 19 Q. That seems to indicate that there were 20 seven firms for the second quarter, and I was 21 wondering if you might explain why one was missing? 22 A. I'd have to investigate that. You know,</p> |


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| <p style="text-align: right;">Page 241</p> <p>1 maybe in the rush up providing back up and making it</p> <p>2 as user friendly as possible, something fell through</p> <p>3 the cracks, but I'd have to look into that.</p> <p>4 Q. And the third quarter -- second quarter</p> <p>5 2007, there are eight firms that are reported,</p> <p>6 correct?</p> <p>7 A. That seems to be correct, yes.</p> <p>8 Q. And then in the third quarter, there are</p> <p>9 ten firms, correct?</p> <p>10 A. That appears to be correct, yes.</p> <p>11 Q. And Morgan Stanley had the lowest EPS</p> <p>12 estimate, a loss of \$3.01, correct?</p> <p>13 A. Well, on this page, I see \$3.01 loss,</p> <p>14 and I see permission denied. I think you'd have to</p> <p>15 correlate it to the next page to identify Morgan</p> <p>16 Stanley at the firm --</p> <p>17 Q. Okay. We're looking, I think, at a</p> <p>18 different tab. Look up at the screen. I think it's</p> <p>19 the second tab, which probably the second page</p> <p>20 of 455, shows that the 3.01 is Morgan Stanley,</p> <p>21 correct?</p> <p>22 A. I see that, yes.</p> | <p style="text-align: right;">Page 243</p> <p>1 Q. And can you describe for me how you</p> <p>2 would do that, generally?</p> <p>3 A. Well, there are various usual</p> <p>4 methodologies. Sometimes you use what is called a</p> <p>5 market approach, which is look at, for instance,</p> <p>6 price earnings, multiples of publicly traded</p> <p>7 companies that are deemed to be similar to the</p> <p>8 company you're valuing, and then using those</p> <p>9 multiples to estimate what the value of this company</p> <p>10 might be if it were publicly traded. Sometimes you</p> <p>11 use fundamental valuation models, such as a</p> <p>12 discounted cash flow method if you have all the</p> <p>13 relevant data and the assumptions, then you could do</p> <p>14 that.</p> <p>15 Sometimes people also look at a version</p> <p>16 of market approach where you look at the price at</p> <p>17 which companies that are deemed to be similar were</p> <p>18 purchased in a takeout or a takeover, and that gives</p> <p>19 you some indication of what the value of that company</p> <p>20 might be.</p> <p>21 Now, some of these methods provide value</p> <p>22 on an as-if publicly traded basis. And if you're</p> |
| <p style="text-align: right;">Page 242</p> <p>1 Q. And so that would be the lowest EPS</p> <p>2 estimate for the third quarter, correct?</p> <p>3 A. That is the lowest number, yes.</p> <p>4 Q. And that's the only quarter in which you</p> <p>5 have an estimate for Morgan Stanley, right?</p> <p>6 A. That appears to be the case, yes.</p> <p>7 Q. And whether GAAP is used to estimate EPS</p> <p>8 or some other measure, it could create a large</p> <p>9 disparity, right?</p> <p>10 A. Well, it depends on what is used</p> <p>11 instead. And the only way for me to verify that was,</p> <p>12 as I described earlier, three firms that we found</p> <p>13 were not making GAAP earnings forecast, which all the</p> <p>14 firms said was hard to do given intricacies of</p> <p>15 Freddie Mac's accounting. That it did not change the</p> <p>16 range between the lowest and the highest estimates</p> <p>17 represented in Figure 3 of my report, I guess, which</p> <p>18 is the first page of 455 that you marked.</p> <p>19 Q. Did you ever value a company that did</p> <p>20 not have a stock that traded in an efficient market?</p> <p>21 A. Yes, I've valued stocks of many private</p> <p>22 companies.</p> | <p style="text-align: right;">Page 244</p> <p>1 dealing with a private company that's not publicly</p> <p>2 traded, then it may be appropriate to apply a</p> <p>3 discount to that value determination for lack of</p> <p>4 liquidity in that stock.</p> <p>5 So that's the general methodology that</p> <p>6 is used.</p> <p>7 MR. MARKOVITS: Goldy, how much time?</p> <p>8 THE COURT REPORTER: Six hours and</p> <p>9 42 minutes.</p> <p>10 MR. MARKOVITS: Freddie, I will cede my</p> <p>11 remaining time in case you want to ask</p> <p>12 questions, but I warn you, if you do, I might</p> <p>13 ask more.</p> <p>14 MR. BLOCK: Okay. I don't think we have</p> <p>15 any questions --</p> <p>16 MR. MARKOVITS: All right.</p> <p>17 MR. BLOCK: -- on behalf of Freddie Mac.</p> <p>18 I don't know about any of the individual</p> <p>19 defendants.</p> <p>20 MR. GOLDFARB: Let me see. No, nothing</p> <p>21 for Mr. Piszal.</p> <p>22 MR. BLOCK: Carla?</p> |

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| <p style="text-align: right;">Page 245</p> <p>1 MS. GAFF: Sorry. Nothing for</p> <p>2 Mr. McQuade.</p> <p>3 MR. BLOCK: I think we're done.</p> <p>4 MR. MARKOVITS: Goldy, will I have the</p> <p>5 rough transcript tonight?</p> <p>6 COURT REPORTER: Yes, within the hour</p> <p>7 you'll have it.</p> <p>8 (Deposition concluded 6:00 p.m.)</p> <p>9 (Reading and signing was requested.)</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> | <p style="text-align: right;">Page 247</p> <p>1 DEPONENT CERTIFICATE</p> <p>2 Our Assignment No. J11026706</p> <p>3 CASE NAME: OPERS v Federal Home Loan Mortgage</p> <p>4 Corporation, et al.</p> <p>5</p> <p>6 DECLARATION UNDER PENALTY OF PERJURY</p> <p>7 I declare under penalty of perjury that I</p> <p>8 have read the entire transcript of my Deposition</p> <p>9 taken in the captioned matter or the same has been</p> <p>10 read to me, and the same is true and accurate, same</p> <p>11 and except for changes and/or corrections, if any, as</p> <p>12 indicated by me on the DEPOSITION ERRATA SHEET</p> <p>13 hereof, with the understanding that I offer these</p> <p>14 changes as if still under oath.</p> <p>15 _____</p> <p>16 DR. MUKESH BAJAJ</p> <p>17 Subscribed and sworn to on the _____ day of</p> <p>18 _____, 2024 before me,</p> <p>19 _____</p> <p>20 Notary Public,</p> <p>21 in and for the State of _____</p> <p>22</p> |
| <p style="text-align: right;">Page 246</p> <p>1 CERTIFICATE OF REPORTER/NOTARY PUBLIC</p> <p>2</p> <p>3 I, Goldy Gold, a Notary Public within and</p> <p>4 for the District of Columbia, do hereby certify that</p> <p>5 the within-named witness personally appeared before</p> <p>6 me at the time and place herein set out, and after</p> <p>7 having been duly sworn by me, according to the law,</p> <p>8 was examined by counsel.</p> <p>9 I further certify that the examination was</p> <p>10 recorded stenographically by me and this transcript</p> <p>11 is a true record of the proceedings.</p> <p>12 I further certify that I am not of counsel</p> <p>13 to any of the parties, nor in any way interested in</p> <p>14 the outcome of this action.</p> <p>15 As witness my hand and notarial seal this</p> <p>16 15th day of March 2024.</p> <p>17</p> <p>18 </p> <p>19 _____</p> <p>20 GOLDY GOLD, RPR</p> <p>21 Notary Public</p> <p>22</p> <p>My Commission Expires: February 29, 2028</p> | <p style="text-align: right;">Page 248</p> <p>1 DEPOSITION ERRATA SHEET</p> <p>2 Page No. _____ Line No. _____ Change to: _____</p> <p>3 _____</p> <p>4 Reason for change: _____</p> <p>5 Page No. _____ Line No. _____ Change to: _____</p> <p>6 _____</p> <p>7 Reason for change: _____</p> <p>8 Page No. _____ Line No. _____ Change to: _____</p> <p>9 _____</p> <p>10 Reason for change: _____</p> <p>11 Page No. _____ Line No. _____ Change to: _____</p> <p>12 _____</p> <p>13 Reason for change: _____</p> <p>14 Page No. _____ Line No. _____ Change to: _____</p> <p>15 _____</p> <p>16 Reason for change: _____</p> <p>17 Page No. _____ Line No. _____ Change to: _____</p> <p>18 _____</p> <p>19 Reason for change: _____</p> <p>20</p> <p>21 SIGNATURE: _____ DATE: _____</p> <p>22 DR. MUKESH BAJAJ</p> |

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| 1 | DEPOSITION ERRATA SHEET |
| 2 | Page No. _____ Line No. _____ Change to: _____ |
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| 21 | SIGNATURE: _____ DATE: _____ |
| 22 | DR. MUKESH BAJAJ |